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## MAKING THE MOVIES



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*Photo by Edison Co.*

WHAT A MOTION PICTURE STUDIO LOOKS LIKE



# MAKING THE MOVIES

BY  
ERNEST A. DENCH

Author of "Playwriting for the  
Cinema," etc.

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## PREFACE

Have I committed an indiscretion by writing this book? I must plead not guilty if I should be thus accused.

Various writers on stagecraft who have opposed taking you behind the scenes argue that to give the show away has proved disastrous in the case of spectacular theatrical productions and trick vaudeville stunts. They are right in their own way, but why should they draw comparisons with an art which has set a new precedent in the entertainment world?

Setting free the various secrets of motion picture producing may disillusion you in some things, but it will reveal the significant fact that motion pictures do not depend for success upon their power to mystify.

The fact has been partly revealed before, for magazines and newspapers have sup-

plied occasional articles on the fascinating subject of the "movies."

Has the popularity of the photoplay diminished since this began? No, a thousand times no.

Consider with this the attitude of the largest American film producing concern. In California they have a town devoted exclusively to the producing of motion pictures. It has been named Universal City. They have made it one of the attractions of California; you have only to refer to the literature by the Santa Fé Railroad to discover this for yourself. Two thousand persons visit it daily. If you are sufficiently interested in motion pictures you are welcomed at the gates of this curious town, and are shown over by a guide so that you can see photoplays being put on.

When an entertainment can do this much and still maintain its vast hold on you it just goes to prove that the photoplay exists on its merits alone. Nothing else counts. A great and glorious victory, to be sure.

I therefore think I have been justified in writing "Making the Movies." It is one

of the first attempts to cover the fascinating subject under one roof, so to speak.

THE AUTHOR.

P.S. The author has to thank the editors of the *Motion Picture Magazine* and the *Picture Play Weekly* for reproducing several articles which originally appeared in their publications.



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# MAKING THE MOVIES

## CHAPTER I

### PUTTING ON A PHOTOPLAY

**I**T must seem to many that the production of a photoplay rests entirely with the author, players and photographer. Yet if the truth be known, they have comparatively little to do with putting on the picture in a satisfactory manner. Good actors, authors and photographers are indispensable, but unless they are guided by a talented director, results will be disappointing. The director is the man.

The movie director has command of everything. The scenario is first handed to him by the scenario editor, who has done his best to fit in the play with the demands. Few scenarios are produced as they are written, for no two minds think alike and the

director frequently changes things that are not even faulty. This is why efforts from certain studios seem to run in the same groove.

After the director has done all the amending in accordance with his fancy, he prepares a prop list, with particulars of furniture and other articles that are required for the scenes. If any of these do not happen to be available they are hired from local dealers. He then peruses the scene plot to discover the number and descriptions of interior settings required. Instructions are issued to the studio hands, who get busy painting and erecting the different sets. Next he hands copies of the scenario to the leading players so they can prepare for the rôles assigned them.

This last, however, is of secondary importance. The director's first task is to obey what is known as the standard length rule. He has to compress a story of fifteen hundred feet into exactly one reel, one thousand feet, or else pad it out to two full reels. This causes him to figure on so many feet for each scene. If the players fail to ap-

proach the speed limit they are drilled until they do.

Although some directors exceed their powers, it is they who can make or mar a player. Frequently a director is called upon to shape a photoplayer out of raw material and it has been by his patience in so doing that some of the stars are with us today. The difference between the experienced player and the trained director is that the former cannot see his faults, whereas the latter can.

No photoplay is put on in a logical manner from beginning to end. One day all the interiors are done and on the next day the company is out scouting about the land for suitable exterior scenes. In this machine-like way the players nearly lose track of the story, and their acting is simply done in portions. The director follows this method because it saves a considerable amount of time.

It is only when the minor members of the company are called for rehearsal that they learn the story of the picture and the parts they are to take. Then when everybody has

made up and dressed, and the scenes and properties are arranged, the director explains the plot to all. How he wants it to be acted he describes by gestures.

A scene has frequently to be rehearsed several times before it satisfies him, then the command comes at once: "All right, this is the picture." This is a film command for the camera man to begin his work and for the actors to do their best.

The director's work does not end here. He stands by the camera with scenario in hand while the operator is turning the crank. Perhaps he notices that the heroine has moved out of focus, so he promptly calls out. The player, however, must not show that she is obvious of her error by looking at the camera, but must get back to the prescribed lines in a natural manner. The director must also be on the alert for overacting and divers other faults.

There is also co-operation between the camera man and director, for otherwise the clever photographic effects so often seen in photoplays would not be possible. Weather and artificial lighting conditions have likewise

to be given consideration to ensure satisfactory results.

After the negative has been developed it is run off in the miniature projecting room and many stops are made while the director orders cuts to be made and explanatory matter added.

Going back to the acting, when a director requires a good-looking young woman, he will turn her down should her beauty merely be in the coloring of her hair and face. What he wants is a face whose beauty is its shape. He will select a blonde in preference to a brunette, as the hair of the blonde comes out dark on the screen and contrasts well with the face. The same is true of people with red hair.

Many players secure an engagement just because they happen to be a type, for the motion picture camera is an unrelenting critic, and the director prefers selecting the player he needs rather than to court failure in making up one physically unfitted for the part.

There are two thought transference mediums which form the stock in trade of the photoplayer. They are facial expression and

gesture. A photoplayer, to be successful, must be sincere and act naturally, avoiding all meaningless gestures and overacting.

The actor must be very cautious in the speed of his movements, for if he was to walk briskly before the camera, it would appear as a run on the film. Every second sixteen different pictures are recorded on the narrow strip of celluloid, and if the player does not want his walk to come out blurred, he must take good care not to travel faster than sixteen inches per second.

The width of the stage before the lens of the camera is six feet, in which narrow space a batch of players have to work together without betraying the fact that they are performing under cramped conditions. The width, however, can be greater as the distance increases, but oftentimes important situations have to be acted through at close quarters.

If the director is not careful, and the actors equally alert, the work of a player in the background will be concealed from view. So you will see that careful attention has to be given to the grouping.



Woe betide a player if he reported for duty wearing a perfectly white suit or dress. The director would promptly tell him to discard it in favor of yellow wearing material, even down to the collar and shirt. This is owing to the fact that white photographs a chalky color.

Make-up is an art in itself, and colors produce an effect opposite to the normal when seen on the film. Rouge, for instance, comes out black, and yellow grease paint is used sparingly, cold cream being first applied to the face. After the application of the paint powder is added.

The players do not have set lines to go by, but, after understanding the plot of the play, they utter sentences that seem natural to the situations. Although we do not hear their words, it must not be imagined that they are allowed to speak in a careless fashion. They have, in fact, to pronounce their words slowly and carefully. Words like "Yes," "No," "Father" and "Mother" are often caught by the inexperienced lip reader by reason of the pains the players take. The recognised rule is to divide single syllables into two. This

means that if a star had to repeat the word "Mother," he would say it in this way: "M-other."

## CHAPTER II

### DO THE PHOTOPLAYERS HAVE AN UNDERSTUDY?

**T**HE question raised in this chapter cannot be answered in a few words. To begin with, let us turn to the legitimate stage. Here every leading player has an understudy for his or her part, for as one rôle is played often for months at a stretch there is the liability of the lead falling ill at a critical time. It is therefore advisable to have another player who understands the part to fall back upon in the case of emergency.

This is not so noticeable on the theatrical stage when the play is gone over hundreds of times as it is in the photoplay which is performed just once. I am not, of course, taking rehearsals into account.

You can just imagine the effect were you to see a one reel play in which Earle Williams was the hero through some of the scenes,

while Maurice Costello deputised for the remainder. Thus, you see, what a farce the situation would develop into.

Well, supposing, a director has started work on a multiple reel subject in which, for instance, Mary Fuller is starred. What would the director do were our idol to be prevented from playing for some unaccountable reason, you will ask?

That director would have to make the best of the bad job, or in other words he would be obliged to wait until Miss Fuller was disposed again before proceeding with the play. In the meantime he would borrow a heroine from another director or else he would use his character or emotional lead in her place. If both of these two expedients failed he would get plays to fit in with the talents of his remaining players.

But the leading photoplayers—the heroines mostly—do have what is known as a substitute to perform the thrilling stunts, which, deemed too dangerous for the leads, are entrusted to some dare devil man, who is made up to pass muster from a distance.

You can't detect the deception because he

generally has his back towards the camera, or is so far in the background that it is impossible to notice the difference.

## CHAPTER III

### EYESIGHT DAMAGE CAUSED THROUGH THE MOTION PICTURE ARCS

**T**HE present method of producing motion pictures opens up a new and serious problem. Much has been written and said in regard to the effects of the photoplayer's work on health, but in every case the one harmful effect has been overlooked.

It is not my intention to deny that most exteriors are taken against nature's backgrounds with daylight as the perfectly natural illumination—that would be foolish, for such is the fact. But nine plays out of every ten contain a number of interior scenes which have perforce to be put on in an artificially lighted studio in broad daylight.

Banks of long powerful mercury tubes line the sets in which the players have to act. Go where you may, you will find few, if any, photographic operations that require so much

light as do motion pictures. It is well to remember that all this extremely brilliant streak of light is concentrated over a limited area of a few feet, and when the player is before the camera he receives it full in the eyes. His face looks like a huckleberry pie and the heat is almost unbearable.

I have known what it is to step under the glow of one modest arc lamp for an instant; it affects the eyes so much that you want instant relief; and you hold your hands up to your eyes when you go back to a less powerful light. When you realise that the photoplayer, save for brief intervals, is compelled by the nature of his work to work for hours under dozens of such lights, then you can appreciate the strain on his eyes.

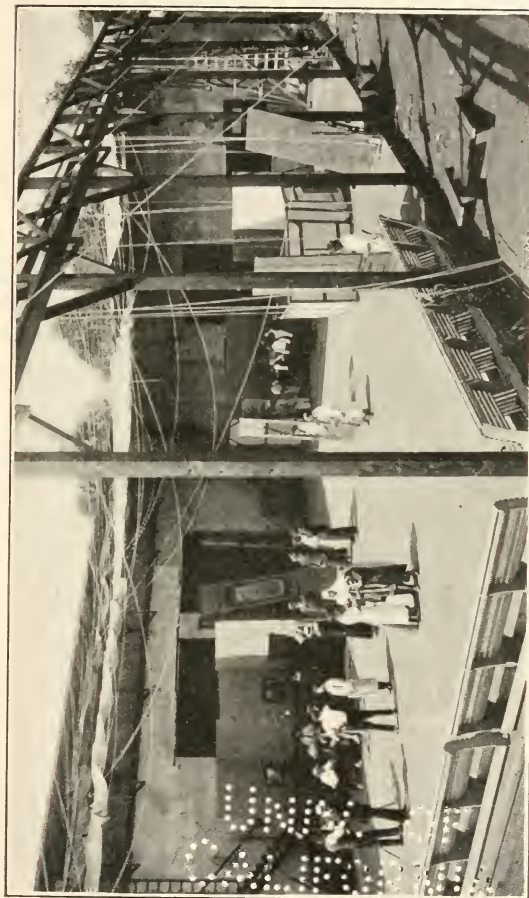
Only the other week Muriel Ostriche had been working under such conditions from early in the morning until late at night in order to complete a certain production on time. All of a sudden she found herself struck blind. She was speedily taken home and put in charge of a trained optician. At first it was feared that the affliction would be permanent, but twelve hours later she had recovered her

sight. And she went back to work without a rest.

This is not the only case that has come under my notice, for I well remember, a few years ago, that a prominent movie actor had to have an operation performed on his eyes and take a lengthy vacation. I have also personally met some photoplayers on whom I detected at a glance the malady of their profession. The face round the eyes is all drawn up and the actor experiences considerable difficulty in looking at you while talking without continually blinking or shifting his eyes. Sometimes a player will betray the blinking in his work.

Out in California, however, the climate is so perfect that many of the producing concerns have open air stages on which they stage interiors with only the sky as the roof. This not only saves the expense of having to resort to artificial light but also protects the actors from injury. But even here for emergencies—particularly during the rainy season—an artificially lighted studio is at their command.





*Photo by Lubin Mfg. Co.*

HOW INTERIOR SCENES ARE STAGED IN THE OPEN



## CHAPTER IV

### DO THE PLAYERS DRINK INTOXICANTS IN MOTION PICTURES?

**M**OTION picture producers have to do many unpleasant things in the cause of "atmosphere." Everything in a photoplay is supposed to be true to life and they strive to maintain this ideal as far as they possibly can.

As they deal with all phases of life, saloon and restaurant scenes as well as examples of secret drinking have to be included.

Mr. L. R. Horton, of the Anti-Saloon League of the State of Washington, recently wrote a circular letter to all the motion picture companies, in the course of which he put forth the following query: "In your many drinking scenes, do the actors drink intoxicating liquor, or do they use a nonalcoholic substitute?"

Particularly satisfactory are the replies

from the Selig and Edison Companies. They make it a strict rule that their players in drinking scenes shall use only ginger ale or sarsaparilla. Moreover, no matter how realistic the scene may have to be nothing stronger than these soft drinks is used. As they aptly point out, to let their players drink intoxicants would surely prevent them from working for hours, or even days, afterwards. The exacting nature of their work demands that they keep in a fit condition all the time.

On the other hand the New York Motion Picture Company, whose productions are released under the Kay Bee, Domino, Broncho and Keystone trademarks, through Tom Ince, their director-in-chief, insist that their players drink liquor when a play calls for it. But it is only fair to say that he trusts them so much that he knows they will not abuse the necessity laid upon them.

When he put on a café scene in "The Reward" recently, he had six dozen quarts of imported champagne displayed. There were, however, so many diners in the scene, and each was so moderate and sensible, that little harm was done. It is extremely hard

for a motion picture player to express the exhilarating effect produced by champagne unless he has actually partaken of some, so the situation was produced as described.

In producing "The Alien," featuring George Beban, the players had to drink liberal quantities of beer in one scene. First the glasses were laid on the table by the property man and then filled with ginger ale. At the top of each glass he poured a layer of soap suds so that it would pass muster as the real thing. But when Mr. Ince surveyed his doings, he indignantly told him to take the stuff away and procure a keg of beer. The scene was delayed half an hour while the beer was obtained from Santa Monica on a racing car.

Once, however, Ince has been known to discard his ironclad principles. That was when a film demanded that a band of hardy mountaineers drink whisky as a normal man does water. He didn't want to take a chance on the picture being delayed while the actors recovered, so he had ginger ale introduced.

The players attached to the other film producing concerns, in order to reproduce alcho-

holic excitement realistically, haunt saloons and restaurants, where they are able to study different types of it. This is undoubtedly the best and least offensive way.

## CHAPTER V

### THOSE TROUBLESOME CHILD PLAYERS

**C**HILDREN comprise a proportion of the audiences at the motion picture theaters and it is only fair that plays should be specially produced for them. Several of the film companies have stock companies comprising children. Although these are competent to act they cannot do so effectively unless under the charge of a grown up director.

Speak to the average director on the subject and he will tell you that he would rather put on the hardest subject he has ever tackled rather than attempt to direct a troupe of children. And there's a reason!

Temperamental to a degree, the youngsters have to be coaxed and bribed with such peace offerings as candy, to carry out his instructions. These rewards for good work help a little, but not to the extent he would like.

The other day I heard that two little girls played in the same production. One whom

we will call Alice had to pretend to be the child of a wealthy family. Her comrade whom we will call Hazel was forced to be a child of the tenements and wear rags for clothes. When Hazel saw Alice in such lovely toggery she sulked and refused to act with Alice unless she could wear an equally attractive costume. The director could not grant what she wished, so Hazel left the studio crying and the director had to get another child to take her place.

The director instructs his tender charges somewhat in this manner: "Look here, Billy, in this game your playmate is going to cheat you and you find him out. As he will not own up to it, you prepare to fight him, but he runs away like the coward he is."

Motion picture acting does not offer an excuse for the children playing hookey, for they act out of school hours.

Most of the child players obtain their positions through influence. The Costello children, for instance, can play the game of make believe as well as can their fond papa, Maurice Costello, and they never make him angry by looking at the camera.



Leland Benham, who is often seen in Thanhouser Pictures in company with both of his parents, Harry Benham and Ethel Cooke Benham, can well be proud of himself. He loves nothing better than acting in their company, for a photoplay sometimes allows him to play jokes on them.

Kathie Fischer, that dainty little girl who used to come on the screen when a Beauty film was shown, nearly always has Marguerite Fischer as a companion. She is Kathie's aunt, and they both get a lot of fun out of playing together.

If you were to ask Bobby Connelly what he best liked doing in photoplays, he would declare he best liked being sick or ill. For a healthy boy such as he is this is a strange choice, as you will agree. He also likes having to cry. When he has to weep his mother tells him a very sad story which impresses him so much that tears roll down his cheeks. After that he is put in the scene and allowed to cry himself out.

You might believe that Bobby thinks about motion pictures all the livelong day. As a matter of fact his beauty sleep is not spoiled,

for he forgets his acting when his work in one film for the day is over.

All the child stars receive quantities of mail from their youthful admirers, but what they do not like are letters of the kind that begin with "Dearie" and are full of silly gush.

## CHAPTER VI

### HIRING PLAYERS FREE FOR THE MOVIES

**I**F you happened to be an employer, wouldn't you be in the seventh heaven of delight if you could hire labor without having to pay for it? It cannot be done in real life, but the motion picture producer, who thrives on reel life, has acquired the knack of obtaining players free. Not feasible, you may say. Just wait, however, until I have cited a few cases which have come under my personal notice and I think you will agree with me.

One of my English friends engaged in the film industry was recently invited to attend the opening of the Regent film studio in London. Noting on the invitation card that a ball was going to be held in connection with the opening, he dressed for the occasion.

The preliminary ceremonies were soon over and all made a beeline for the portion of the studio set apart as a ballroom. The dancing

proceeded with a nice spring, but all the merry couples were interrupted by a business-like operator and a smiling director, who asked all present if they would mind imparting the necessary realism to the drawing room scenes of a society drama. No one, of course, was impolite enough to object, so the camera clicked away to their actions for the rest of the evening. This was combining business with pleasure with a vengeance.

At the time the Imp production of "Ivanhoe" was put on at Chepstow Castle, Wales, newspapermen were invited to witness its production. The director, Herbert Brenon, was short of extras to fight in the Norman Army, so it occurred to him to have some of the reporters don armour and sword. After doing this they were able to turn out some unusually interesting copy of their experiences.

Coming closer home, I am told that the Edison Company but a short time ago had occasion to conduct filming operations in New York's Chinatown. The director could have hired a few supers at five dollars a day and fixed them up as passable celestials, but he was on the trail of realism.

The superstitious Chinaman imagines all sorts of things are going to occur if he is caught by a camera of any kind, so it is like asking him to kill himself to persuade him to pose before one.

A way out of the difficulty was discovered by hiring a wagon and filling it with dummy merchandise. While the driver stopped to make an apparent delivery, the camera man poked the lens of the motion picture machine through a hole in the wagon and snapped the yellow skinned men who were within range of it.

When the Lubin Company had to represent a scenario editor's room in a photoplay, instead of employing ordinary extras they commanded the services of all the men who write plays appearing under the Liberty Bell brand. Apart from the advantage of expense saved, there was that of realism gained; there could be no loophole for criticism against the actions of the pro tem actors.

The Kalem Company took advantage of a Motion Picture Exposition held in New York City by arranging for exhibitors to visit their plant out in New Jersey. When they were

shown over they were asked to "dress in" a post election scene in a political drama.

The director, however, is not always successful. Especially is this the case when he wants prominent persons to pose before the clicking camera.

The Edison Company furnished an example of this when they despatched a troupe of players to Washington recently. A poverty-stricken girl approached Bryan in a pleading manner as he was leaving one of the government buildings. She began unfolding a tale of woe, but instead of listening kindly, Bryan thrust her aside and walked indignantly to his automobile. The reason for his attitude was that he had caught sight of the camera.

## CHAPTER VII

### MOVIE STARS WHO RISK THEIR LIVES FOR REALISTIC FILMS

**M**OVIE stars do not carry on their work without great risk of personal injury, inasmuch as they are called upon to do all sorts of seemingly impossible feats, so that sensational incidents may be produced for the entertainment of movie fans.

Take for instance, Mary Fuller, Universal's charming heroine. Some time ago she had to ride a horse—not on the tame stable variety, but a real bucking broncho hired from a circus in order to obtain the right effect for a picture. The animal raced away at full speed; then it suddenly stopped—a habit with bronchos. Miss Fuller escaped with only a sprained back.

#### RISKY RIDE OVER A WEIR

Marc McDermott, of Edison, well recalls the time when he was acting in England.

While playing in "The Young Squire's Love Story," on the banks of the Thames, near Wallingford, he was set off to be carried over a weir with the river flooded. Naturally, he was safeguarded by men stationed on the bank, out of the camera's focus and well equipped with ropes and lines, to rescue him should an accident occur. The accident did occur. McDermott was swept over the fall; it seemed to him quite as great as Niagara—so he said afterward. For with him, a strong and experienced swimmer, there was an afterwards.

#### JUMP FROM A GALLOPING HORSE

Then there is Miss Blanche Sweet, now with the Lasky Company. One daring deed she undertook occurred in a film where she had to be transferred from the saddle of one galloping horse to that of another. This feat Miss Sweet completed successfully, but not without suffering many bruises and a sprained wrist.

At another time she drove a large pair-horse prairie schooner over some of the roughest country there is to be found in



America. When the ride was at an end the palms of her hands were one mass of cuts, on account of the rough reins and the strong pulling of the horses.

#### CHASED IN REALITY

Another popular player is Henry Walthall. On one occasion he participated in a production made up as a sneak-thief, when he was called upon to smash the window of a real jeweller's and dash off with a handful of rings. The street selected was a quiet one, and the director gathered together a throng of spectators amongst his supers. However, as soon as the window was broken and the cry of "Stop thief" had been raised amongst the spectators, it attracted people to the scene. Down the street ran Henry Walthall, with a mob of about fifty pursuing him, not thinking, of course, that this was a pre-arranged robbery. When thoroughly run out, Mr. Walthall found himself surrounded by an angry crowd, which had now increased to a hundred. Luckily the timely advent of the persuasive director saved the awkward situation.

## PERILOUS POSITION ON ROCKS

On one occasion Miss Mabel Normand, Keystone's pretty comedienne, was nearly the victim of a tragedy. It took place while she was working in a scene on the beach. Miss Normand, as the heroine, was lashed securely to a rock which jutted out, the ocean waves touching her. As the actual filming of the scene was being proceeded with a huge breaker rolled in, causing the actress to be swept away among the rocks on the beach. Miss Normand was bruised and unconscious when rescued from her perilous position.

## BRONCHO BILLY'S NEAR GO

It was on the brink of a yawning chasm that Broncho Billy, of Essanay fame, fought a hand-to-hand encounter with Frederick Church, the villain, in a Western production. The play called for a swift break while both were on the edge of the precipice, where they spring aside for a breather and then grapple with each other again. G. M. Anderson, with his back to the chasm, gave the signal for the rest spell. As the players sprang

aside, Church was horrified to witness our hero stumble, fall heavily, and disappear over the precipice. With his body spread out, Church peeped over the edge and was relieved to find Broncho Billy, as large as life, hanging from the branch of a projecting tree stump. A rope was promptly secured, and Broncho Billy quickly removed to safety. He was in an exhausted condition, his hands being cut all over. The Essanay "star" confesses that it was the narrowest escape of his life.

#### MISTAKEN FOR SUFFRAGETTES

Suffragettes do not find things exactly to their liking in America. Two former Kalemites, Miss Ruth Roland and Miss Marian Sais, figured prominently in a Kalem drama sometime ago. In accordance with their parts, these two players were attired in men's clothes. When they appeared in the open street in these "togs" they created quite a sensation. "They're going to break windows," called out one spectator. "Duck 'em," shouted another. As the situation was getting critical, the two players ran for all

they were worth—so did the others. Out came Ruth's property pistol, and with the assistance of Marian the fusillade was maintained and the pursuers held off until both reached the Kalem studio. It is likely that the inhabitants of this Californian town used discretion after this mistake.

## CHAPTER VIII

### MOTION PICTURE MAKING TOWNS AND ESTATES

**L**IKE most big business undertakings of the present day, the motion picture industry sprang up in an unobtrusive manner and was heralded with no clashing of arms or blowing of trumpets. It seemed to want to bloom and blush unseen in the approved manner of a rose, with this difference, however, that the producers were undoubtedly truly ashamed of their unpretentious start. Any old building was hired as a studio and the concerns began producing in a haphazard fashion with nothing regular about their plant or the personnel of their staff.

Considering the extreme crudeness of their attempts it was remarkable that motion pictures leaped into instant popularity, which grew and grew as each month passed. Then

the time came when the producers decided they must move with the times and this was how pretentious studios and regular stock companies came into being.

Not so long after the big producers found that they had outgrown even this advance and then motion-picture-making cities and estates were created to cope with the situation.

Up to that time the producers had given little evidence that they were everyday business men, and people throughout the country had begun to imagine that they were literally swimming in money. This meant that when a producer desired the use of some certain desirable location for a photoplay, a fabulous sum was demanded for the necessary privilege. Then when a producer wanted to burn down a house or produce some other such spectacular effect for a picture, owners greatly overvalued their property. Again, when the costumes, furniture and other things in the way of props were hired for some film, the charges were considerably in excess of the ordinary fees.

Aside from this, the cost of production



*Photo by Universal Mfg. Co.*  
 KING BAGGOT, IMP STAR, MAKING UP



*Photo by World Film Corporation.*  
 THIS DIRECTOR PREFERS TO USE A MECAPHONE

THE  
LIBRARY OF THE  
MUSEUM OF NATURAL HISTORY  
AND  
ZOOLOGY  
OF THE  
CITY OF NEW YORK  
AND  
THE  
ADJACENT ISLANDS  
AND  
THE  
LIBRARY OF THE  
AMERICAN MUSEUM OF NATURAL HISTORY  
OF THE  
CITY OF NEW YORK  
AND  
THE  
ADJACENT ISLANDS



was increasing rapidly, for big salaries had to be paid to the leading players and more money and pains expended on properties. Ruin stared the motion picture companies in the face, so there was nothing more natural for them to do than to re-organise along approved business lines. But there are real disadvantages in the scheme of motion picture estates which they adopted.

In the first place a film estate for the taking of natural backgrounds produces a sameness in the films sent out from one studio. After much use of the estate, all the backgrounds will have been given over and over again. And nothing annoys a photoplay patron so much as to come across a rural setting he remembers having seen in a previous production. It detracts from the element of realism, the vital attraction of the silent drama. The same trouble occasionally occurs in a single production, the producer either having failed to utilise the variety of settings at his disposal or else, lacking variety, having had to introduce the same scenes a number of times.

Again, not only does the picture estate re-

sult in a loss of realism, but also in the loss of truth.

Your average American motion picture producing concern sells its films in practically all quarters of the globe and it is therefore to its financial advantage to produce photoplays portraying life in other countries. How can the director, then, put on, for instance, a story of medieval France out in modern California? Where there is a will there is a way, as the adage goes, so the stage carpenters erect a castle and gabled buildings and lay down a cobble stone street. These are built and laid so substantially that the fiercest wind would not make them turn a hair, so to speak. Then if an actor feels inclined to lean against one of the structures it will not bend or give way. The director may also wish to stage a street in Cairo, so he resorts to the same plan.

Disadvantageous as this is, it is not, however, so painfully artificial as a few painted sets of scenery at the legitimate theater, for the illusion is so perfect when seen on the screen that it passes muster without adverse criticism. These picture making towns are

so well laid out that any portion can serve practically any purpose under the sun. All this saves the producer considerable time and money in not having to despatch a troupe of players abroad in the elusive quest of atmosphere.

There are, at the present time, five such producing plants in America. In California, there are Universal City, the Selig Wild Animal Park, Horsley Zoo, and Inceville, and in Pennsylvania, Lubinville. In Europe there are several plants of a similar nature.

## CHAPTER IX

### UTILISING COUNTRY ESTATES FOR MOTION PICTURE PLAYS

**A**LL is grist that comes to the mill of the motion picture producer. One week he may put on a play of life in a city tenement. That does not present any difficulty. But a week later his next story will probably deal with persons in high society and then he is confronted with a much harder task.

If he has been in the locality for any length of time he will have compiled a list of the imposing estates in the neighbourhood, for he can hardly adopt the makeshift method of the theatrical producer and confine his natural backgrounds to painted canvas. He must, therefore, approach the owner of the residence which strikes him as ideal for the necessary permission. But this is not so easy to obtain as one might expect.

In the early days of the present great in-



*Photo by Allison and Hadaway.*

PUTTING ON A SCENE IN A MANSION HIRED BY THE VITAGRAPH COMPANY. THE  
TRANSPORTABLE ARC LAMPS AT BOTH SIDES PROVIDE SUFFICIENT ILLUMINATION

THE  
LIBRARY  
OF THE  
MUSEUM OF  
COMPARATIVE ZOOLOGY  
AT  
HARVARD UNIVERSITY  
CAMBRIDGE, MASS.

dustry many people had a deep rooted prejudice against motion pictures and imagined it to be beneath their dignity to consent to have their property utilised for motion picture purposes. That the producer then did not do justice to his subjects is painfully true, but this cannot be used in evidence against him to-day when he is making continued progress.

Granted that permission is obtained, the actors may make a pretence of going inside a mansion. But note that the elaborate drawing room scene that next meets your gaze is taken at some other time in the studio, where it has been erected and dressed with extreme care in every detail by a real decorative artist.

The size of the photoplay stage is six feet from one side to the other and the player who moves beyond this gets out of focus. From this information you will appreciate the skill of the producer who puts on an elaborate ballroom scene in a realistic manner.

Although the vision of the camera is limited, immediately in front of the lens, to a field of six feet in extent to right and left of the lens, its field of vision can be made to be

many times this width and breadth as the depth increases. In this way rooms of immense size are represented. If a director were to attempt to show portions of action that take place in a corner of the room in the one big scene they would not be understood at all. So he introduces some "close up" views. Then if he wants to emphasise the fact that the room is as wide as it is long he panorams the player while he or she walks from one side to the other.

For every motion picture company that despatches a troupe of players in search of the elusive atmosphere, nine stay at home and make use of the facilities at their disposal. In California, for instance, there are many types of architecture and the director can obtain practically everything to fulfill his requirements, with the possible exception of a Swiss chalet.

About two years ago the movies were employed under false pretenses. It happened in this way. A film company called upon a wealthy banker and asked if he would be so kind as to permit the free use of his country estate. He willingly consented, and on leav-



ing his residence to keep an engagement, he instructed the patrolman to take no notice of anything unusual that might occur.

A few minutes later when the burglar left by the window in the approved manner with a bag of swag, the watchman looked on unconcernedly, for did not the presence of the camera tell him that it was only for the movies? Besides, he had been prepared for the unexpected.

When the banker returned home, however, he came in for a revelation, all his silver plate and other valuables having been stolen. After investigating, he found out that the credential bearing the name of a reputable producing concern was a fake.

In too many cases at the present time the director cannot obtain the necessary privilege unless he pays five dollars or more, according to the value placed upon the property by the owner. The terms demanded in some instances would ruin any film company in no time. One of the companies—the Universal—has taken action on this petty graft, as they term it, and in their studio yard they now possess the facilities to make anything from

a medieval castle to a modern millionaire's mansion. Whether they find it more effective to do things in this way is rather a moot point.

The Lubin Company has seldom relied upon outside assistance, and on the estate where the president and his family reside, pleasure is combined with business. It comprises five hundred acres of the most charming country existent in Pennsylvania. Furthermore, it is situated on historic ground where Washington held the British in check during one terrible winter. No better natural effects can be found for rural photoplays than there are on this estate where there is a picturesque mansion, a conservatory, half a dozen other buildings and spacious grounds. A river runs through for two miles; there is a duck pond, a deer park and a railroad station, the latter having been specially erected at a cost of several thousand dollars. Then when a railroad or auto smash is needed all they have to do is to throw money away like water. A house can be burnt down; an earthquake raised, while they can stage a cliff fight effectively and produce "Western"

dramas without any one being the wiser that they were taken in the East.

The motto of the motion picture producer seems to be summed up as follows: "If you can't get a thing one way, try another."

## CHAPTER X

### HOW RAILROAD PHOTOPLAYS ARE MADE

A GOOD old standby for the motion picture director in need of a thrilling or suspense-creating picture is the railroad drama. It has performed yeoman service ever since the movies came out of their swaddling clothes, and it is likely to for much longer.

The successful ingredients for the receipt of a railroad film are these: Procure one pretty girl and a handsome and brave young man. Mix well with a villain of the deepest dye, who mars their happiness. He is, however, the victim of a railroad accident, which allows the inevitable happy ending to be presented.

Another ever favorite device is to introduce the heroine as a telegraphist or some clerk at a rural railroad depot. She is attacked by thieves who desire to possess the

gold she is so zealously guarding. They reverse the signals to gain their purpose. In some ingenious manner she informs her lover of her plight without her attackers being aware of it. So it is not long before we see the hero dashing down the track in the nick of time to prevent a collision. He either waves a handkerchief or else he turns the switch.

It will now be interesting to cast a glance behind the scenes just to find out how these pictures are made.

When a film concern sets about to produce one or more of such dramas they lease a portion of the side track of a railroad nearby. The player cast to perform the driving act is instructed by a full fledged locomotive engineer until he or she—oh, yes, the ladies are not exempt—has passably mastered the complexities of the engine. This takes, on an average, about two days.

After everything is ready the director puts the players through their parts, when all are in for a strenuous time. In nine cases out of ten the camera has to be stationed on the engine for several of the scenes so that the

movie driver can be shown at work in the cab, or, failing that, tussling with the villain. Both have to be extremely careful that they do not overbalance themselves.

If you were to bet that they always take the interiors inside a genuine pullman or railroad office, then you would lose. You see, there is not sufficient light in most of these places to give a clean picture, so it is necessary to build them up in the studio.

But the railroad collision act is a different sort altogether. Usually two locomotives which have seen their best days, and half a dozen carriages are purchased outright. This has been known to cost a film company \$50,000 for a single occasion. Needless to say, such heavy outlays are reserved for the big feature productions; and incidents for several of these are obtained at the same time.

Everything is so carefully planned that there is little chance of the unexpected to derange things. The trains run along a single track, and at the given signal, the engineers open the throttles wide and then jump from their cabs. The trains now dash on to destruction. And, last of all, comes the fatal

crash, which is the most eventful moment for the squad of camera men who focus their machines from all points of vantage.

The scene then changes, allowing time for the photoplayers, wearing torn and dirty clothing and their features made up, to clamber into the wrecked carriages. The cameras again get busy and the "dead and injured passengers" are lifted out by the rescuing party. The performance is so interesting that frequently the railroad companies run excursions to the scene of the smash.

There are, however, motion picture firms, who, too mean to do the thing in proper style, hire perfectly good rolling stock, but cut out the actual collision. At the right moment engines of the scrap iron variety are substituted and placed together to give the smash effect.

One company—the Kalem—specialises in railroad dramas, the stories of which are written by a railroad man. Under this brand a series of single reel dramas entitled "The Hazards of Helen" has appeared, featuring Helen Holmes as a girl telegraphist.

Europe seldom sends us a railroad picture

produced in the thorough manner which characterises the American product. Some years back a fatal accident occurred during the producing of one of these plays in England, since which time the railroad companies there have stubbornly declined to co-operate with motion picture producers. It is much the same in other European countries.



## CHAPTER XI

### PUTTING THE THRILLS INTO RAILROAD MOVIE DRAMAS

THE producing of a railroad film drama does not end by the leasing of a side track, a brace of locomotives and six or more coaches. Oh, by no means, let me assure you! That done, the task, in fact, has hardly begun, for the director has yet to put his players through the mill. And, believe me, theirs is no enviable task: they must think nothing of breaking their necks and generally flirting with death. It must be said, however, in fairness, that all human precautions are taken to prevent accidents.

Probably the biggest railroad spectacle in the history of motion pictures was staged in the fall of 1914 at Milltown, New Jersey, on a spur of the Raritan River Railroad. In this case a break from the ordinary rule was made, the thrill being that a train, made up

of one old locomotive and three coaches, should fall into the water when passing over a trestle across a lake, on account of the supports giving way. This was accomplished by erecting a trestle specially for the occasion. It joined the main line seventy-five feet from the shore and had a sharp curve of one hundred and seventy-five feet. An expert took charge of the dynamiting arrangements and everything was carefully timed. The engineer was told to set the speed at fifteen miles per hour before deserting the cab, so that the eight camera men, stationed at different points, might get a panorama as the train made its fatal journey. If it travelled any faster it would blur on the film. But the engineer had evidently opened the throttle too wide, for the train slid by at double the desired speed. The dynamite near the end of the trestle then exploded, sending the train and the supports into the water.

The front of the engine came to a standstill within a few feet of one of the daredevil operators who was busy filming the wreck from a small platform. Everybody present feared that the locomotive would

knock the platform over and despatch the young man to the icy depths below. Although he was spared this fate, he was simply deluged with sprays of water, sent up by the plunging train. Yet this did not deter him from continuing to grind.

But this was not all, for Mr. Film Director believes in getting his money's worth. Now for the grand finale. Dynamite was placed inside the engine, which floated on the surface, and exploded quite satisfactorily. This nice realistic incident was dubbed a "boiler explosion" when seen on the film. In the wrecked cars were dummies, and after the wreck, the twenty or so players who were cast as the passengers jumped into the lake from a float. There was, however, a genuine ring about their cries for help and attempts to rescue each other, for the water was very chilly and they nearly all caught the cramps. A skiff was immediately despatched from the shore and eventually rescued the party, some only in the nick of time.

Earle Williams, the Vitagraph star, however, managed to swim with the help of a boy, although several times he seemed to be on the

verge of sinking. He was in an exhausted condition when taken out.

The railroad scenes for the Pathé production, "The Taint," were taken in New Jersey by permission of the Wharton Railroad. An engine was purchased with the intention of converting it into scrap iron for the film.

The perilous task, the hero, Ed José, had before him was to elude his attackers by letting the engine rush at a headlong pace and then escape by jumping off. All went well until the siding hove in sight; then Ed leaped over the embankment. The somersaults he made down that steep bank would have done credit to a trained acrobat. He was all aches and bruises afterwards.

The camera was set up just a few feet from the ditch where the engine was to fall and narrowly escaped destruction. But luckily the locomotive ended its career just a few feet away, sending streams of earth and stones over the plucky operator.

Who, then, will now say that railroad dramas are tame propositions for those who make them?

## CHAPTER XII

### MAKING MARINE DRAMAS FOR THE MOVIES

**I**F there is one thing more than another which has a special interest for the motion picture producer, it is marine life in all its phases. What accounts for this fascination? A study of the movie screens will soon reveal the answer. The film producer adores thrills and water craft supply the desired opportunities to his complete satisfaction.

He seems, however, to make a favorite of no single kind of craft, for he will handle anything from a raft to an ocean liner. Among the feats he revels in are these: accidental turnover of a rowing boat, wreck of a craft by collision, or by wreck against an iceberg or rocks, fire at sea.

When a scenario stipulates that a yacht has to be set on fire and a boiler explosion despatch it beneath the waters, an old craft

is purchased. After the preliminary deck scenes leading up to the sensational situation have been produced, the vessel is divested of its interior fittings, for the producer is not so rash as is commonly supposed. The next stage is to saturate the ship with oil and turpentine and place sticks of dynamite in the hold. It is dangerous work for the men who are assigned this task. Immediately their work is over they jump off the yacht into the sea and swim about until picked up by a motor boat and taken to safety. Another example of the producer's determination to get full value for his outlay is given in that he never times the dynamite to explode until the ship has been well burned. Oftentimes scenes are also taken for several productions at the same time.

In the Vitagraph picture, "My Official Wife," it will be remembered that an expensive yacht was blown up by a torpedo. Clara Kimball Young, the well known photoplayer, witnessed this and declared it was a shame that such a pretty boat should be destroyed. The director informed her, jokingly, that she could have it as a gift, if it was of any use to

her after it had got into the clutches of Davy Jones. She decided to take a sporting chance and had a diver investigate the vessel. To her joy, he reported that although it appeared in the picture that the torpedo split the yacht in half, it had only torn a hole in the side. Miss Young at once had the yacht raised and repaired. It is now a trustworthy pleasure craft, in which its fair owner takes many trips.

There are occasions when a misfortune proves a blessing in disguise to the maker of movies. On hearing of a wreck along the coast within easy distance he will promptly journey with his band of players and camera man, weaving a marine drama en route and getting all the atmosphere he requires. Neither is he averse to the other money saving plan of cutting views from an animated newspaper.

There is also a certain film concern, which, unlike others in the same business, apparently does not believe in the value of realism. They show a marked preference for the easy and inexpensive way of framing up a wreck in the studio. A miniature model of a ship

is placed on the edge of a green topped table. The "wreck" is produced by means of an electrical device and is photographed a good distance away from the camera. On the next fine day some sea scenes are produced on the coast nearby. Both negatives are then cut in two and one section of each used. The first negative is cut in half along the line of the table top, which is the "water line," and the real marine half of the other one matches it exactly. This creates a perfect illusion.

Of course when you see water flooding the cabins or hold or smoke and flames filling and devouring them, with the passengers and crew frantically trying to escape, you must know that these situations are faked in the studio, as they would be too dangerous for the actors if staged on a real ship, let alone the disadvantage that the inferior light conditions would not permit good photography.

In the production of that masterpiece, "Atlantis," the *C. F. Titgen* (8,137 tons), of the Scandinavian American Line, was hired. Five hundred players acted as the passengers who fought for the boats; many leaped into the sea, some of whom were "drowned."



All the horrors, in fact, of such a calamity were dragged in.

Many were the rehearsals to get the actors to render vivid portrayals. Strange as it may seem, the *G. F. Titgen* was not sunk at all. Its wreck was only cleverly suggested. The producers saved considerable expense by having a wooden replica of the liner made and sunk to the bottom.

The motion picture director is also partial to stories of pirate days. The difficulty the director of the Powers Company had when about to put on a play of Billy Hayes, the noted pirate and smuggler of thirty years ago, was to discover a suitable craft. On a trip to San Pedro he had the good fortune to hire for a week an antiquated ship which had been confiscated by the government. On board was an old Norwegian who informed him that the ship was originally *The Sprite*, a vessel which had seen many a bloody encounter. Once it had been seized by Billy Hayes, and with it he terrorised Pacific coast towns for thirty years.

## CHAPTER XIII

### HOW FIRE FILMS ARE TAKEN

**W**HEN a motion picture company wishes to take a fire picture all they have to do is to pay for the use of an empty house for an hour or so. The owner of it does not mind so long as they do not burn the house down in grim reality. In order to make the film convincing it is necessary to smash the windows and break the doors down, but the producer, of course, pays for all damage done. The players and camera men being in readiness, it is the duty of the property man to place a chemical preparation known as "smoke pots" inside the windows, and cleverly conceal them between curtains and blinds. Then harmless smoke begins to pour out of the house.

Not very far away is a fire engine and firemen only waiting for their cue to go into the picture.

If there is anything that attracts a crowd it

is a fire, so the excited spectators are supplied at no expense to the firm.

The engine, at a given signal, races off with the volunteer crowd in pursuit and soon arrives at the scene of operations.

There is always plenty of door smashing and window-breaking by the gallant fire-fighters, because directors know only too well that we fans are fond of excitement. The firemen use their axes, having no regard as to the damage they do.

About this time forks of flames appear from the windows, while the smoke issues in volumes. The smoke and flames, by the way, emanate from the "smoke pots" and do no damage at all.

The scenes that are apparently taken inside the house, where we see firemen staggering along with human bodies, have probably been filmed several days before in the studio itself, the "smoke pots" contributing to the illusion of fire.

Next we see people being rescued from the burning building, and this is acted so realistically that the spectators do all the applauding without being asked to.

The human touch is given to these photo-plays, so as to gain the sympathy of those watching as well as picturegoers.

It wouldn't be right if the heroine were left to perish in the flames and so it falls to the hero to rescue her. As the hero evades the firemen and dashes into the midst of the flames the crowd turns away in horror.

Since the fire has been in progress water has been poured right and left on the flames and everything done to make the picture realistic and thrilling. Eventually the heroine is brought to safety and, as the hero embraces her, the camera man stops turning the handle.

The "smoke pots" have done their work well, for the only damage done to the house is the breaking of the doors and windows.

## CHAPTER XIV

### USING AUTOS IN THE MOVIES

**T**HE automobile has become such an important factor in film production to-day that were the film manufacturers to be suddenly deprived of their machines the loss they feel would be as great as if their "star" player were to be taken ill.

Supposing, for instance, you had an invitation to visit the plants of the motion picture makers. The first thing that would catch your eyes would be the garage in each studio yard. In each one you would find any number up to twenty autos of all makes and ages. For these cars the movie producers have several practical uses.

Since the one great attraction of the movies is its charming natural backgrounds, the director cannot undertake all his work in the studio. He and his company have to do a good deal of travelling in pursuit of choice

outdoor scenes and he seldom knows from one day to another what kind of settings will be needed. In nine cases out of ten the film troupe will have to be taken miles before the right locations are found. The trip, too, must be done in a hurry, and the auto, therefore, is the quickest and most reliable way.

The very same autos come in exceedingly handy when the players have to pretend to make a journey in a photoplay. For producing thrills they are simply great. When movie fans see the hero rushing in a motor to spoil the villain's plans and rescue the heroine they grip their seats in tense speculation as to whether he will arrive in time.

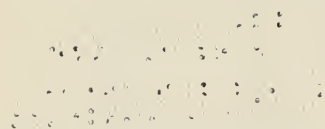
Oftentimes the scenario demands that two autos collide or that one fall over a cliff. The expense of these feats done in proper style is prohibitive. There has been a lot of nonsense written as to the extravagance of picture producers, but like men in other lines of business, they do not squander good money rashly if they can help it.

Whenever you see a motor car tumble over the cliff in the movies, and smash to atoms when it reaches the bottom, you can



*Photo by Lubin Mfg. Co.*

THE AUTO BUS IS USED TO TRANSPORT PLAYERS TO THE DESIRED LOCATIONS





bet your life on it that the picture is faked. What is done is that when the auto proceeds towards the edge of the cliff, the camera stops,—and so does the car, which turns back and exits. Enter now a wooden replica of the auto you just saw, so cleverly constructed that you would have to look pretty closely to detect that it was not genuine. These machines are turned out quite rapidly and cheaply by the carpenters in the employ of the film concern.

Seated in the auto are dummies to represent the passengers—for the players are not so dare-devil as all that.

The camera man now gets busy again and the director, out of range of the camera, gives the car a push to send it over the cliff. At the bottom it is revealed completely wrecked, and after another stop, the performers walk down in the ordinary way. They then make up as though badly injured and scramble out of the débris. As none of the intervals are shown on the screen the illusion is perfect.

## CHAPTER XV

### UNDERGROUND WITH A MOVIE CAMERA

“**W**HAT next?” one might well ask when referring to the accomplishments of movie photography. The ever encroaching camera has been taken below the ocean’s depths, and just now the problem of taking pictures at night has been overcome.

There remains but one more difficult place—underground. But (a fact little known) even this difficulty has not proved beyond the capabilities of the astute film producer.

It was a pretty dangerous thing to equip a coal mine with naked arc lamps, but Pathé Freres did this in England some time back for a colliery picture. It might be pointed out, however, that the mine in question was one of the least dangerous, for it contained a small amount of coal and a comparatively great amount of copper ore. But even though the volume of dangerous gasses were at a mini-

mum it was a pretty dangerous task all the same. The film director was given but six hours to accomplish his work and from midnight to six in the morning he himself, the players, and the camera man worked like engines at the bottom of the pit. Their efforts proved successful, but the whole troop were as black as niggers when they came to the surface. Had the Board of Trades learnt of the thing beforehand they would certainly have prevented such a risky undertaking.

Our producers are no whit behind, for a film was taken at a depth of 5300 feet below the surface at the Calumet and Hecla Mines, Michigan. At this record depth artificial lighting equipment was installed. The results were excellent.

In New York the Vitagraph Company succeeded in filming the McAdoo tunnels under the North River and the Subways for the Panama-Pacific Exposition. Sufficient light was provided for photographing by the special portable arc lamp.

## CHAPTER XVI

### AVIATION IN THE MOVIES

**W**HAT most of all does the average motion picture director like to put on the film? Why, a story pulsating with thrills, as he would describe it in his trade paper advertisements. Aviation fills his somewhat exacting desires admirably, and one does not have to seek far to ascertain why he exhibits such a desired preference for aircraft being "featured," to use a studio term, in photo-plays. There are tricks in every trade, which fact is as true of the motion picture industry as any other.

Maybe you have got into the habit of dropping into a movie show to pass an idle hour or so away and witness an aviation picture every now and then. The most common situation of all is that in which the hero figures in the capacity of aviator. There is a scene where

he kisses and embraces his sweetheart, after which he steps into the machine in proper costume and gets ready for the flight. Then, as if a magic wand had been waved, he appears flying in mid air. But there is a big motive for deliberately deleting the actual start. At this stage, a real aviator, whose services are hired, takes the place of the movie airman. When the airman is in full flight, the substitution cannot be detected. The same ruse is repeated when the aviator reaches terra firma again.

Antony Jannus, the well known young, old time airman, recently complained of the awkwardness with which the machines were manipulated in most cases. He has always been keenly disappointed to see an airman apparently approaching close to the camera to demonstrate his ability, and then have him promptly turn aside before he had got anywhere near.

"Many men who are picking up easy money with aircraft are not expert enough," he said, in a press interview, "to make a machine do what they want it to do. But assuming that they are top notch pilots, their usual lack of

histrionic ability must necessarily keep them up stage to a certain extent."

Another plan the director favors in certain instances is to utilise a portion of an animated newspaper containing views of an aerial derby or a trial flight and ingeniously combine the pick of the scenes in the play. There was recently shown in England a war drama dealing with the Zeppelin peril. Real airships were introduced and it was stated that they flew over England. Little, however, did the audiences realise that the scenes were cut out from a journal illustrating a trial flight of several of these air monsters over Germany prior to the war.

In a French film a wonderful panorama of the earth was presented. This was taken with an Aeroscope camera, which is just like an ordinary kodak. The operator was taken up in the aeroplane as a passenger. He strapped his machine to the flying machine and merely turned the handle.

If you really believe that the producer is rash enough to squander good money on the wrecking of a genuine flying machine, then you are very much mistaken. A rough skeleton

is constructed by the studio carpenters and is smothered with gasoline to make it burn fiercely and quickly. Then at the end we see the actor airman, made up to appear injured and dishevelled, free himself from the wreckage. And so the make believe game goes merrily on.

## CHAPTER XVII

### FILMING EARTHQUAKES—BEFORE AND AFTER

**E**XACTLY a week after the recent earthquake occurred in Italy, a film man in this country unearthed a copy of a picture depicting the Messina earthquake of a few years ago. He offered it to exhibitors as portraying the latest disaster, but any one with a grain of common sense must have realised it was a fake, for it would have taken at least a fortnight to get the genuine film over from Italy. You may be sure, however, that there were exhibitors who were not above accepting the fakir's offer.

Cinematographers have even had the nerve to go inside volcanos in actual eruption. Not so long ago a plucky Italian ventured up Mount Etna at a time of its activity, going within a few feet of the edge of the great crater. Added to the eruption was a fierce wind, and in order to get out of the path of



the ashes, the camera man took up his position on the windward side. This was the first occasion on which an active crater has been filmed inside. The film showed the stream of lava, the dense volumes of smoke coming up and the volcanic explosions.

Frederick Burlingham, a motion picture photographer with several perilous undertakings to his credit, managed to descend Mount Vesuvius to a depth of twelve hundred and twelve feet, reaching the bottom of the cone and a point within two feet of the abyss, which is two miles deep with a temperature of sixty degrees centigrade. New avalanches were impending and the bottom of the cave, covered with fresh lava, gave signs of a new explosion.

On the way down, this operator, when at a depth of five hundred feet, was almost smothered with the main current of smoke. Not only were there sulphur fumes to contend with, but there were also dense clouds of corrosive hydrochloric acid. As a protection from these, he lay down as still as he could and refrained from breathing until he could no longer hold out. Then he used several

thicknesses of cloth as a respirator. He stood this ordeal for twenty minutes, and finding the situation getting desperate, he decided to turn back and abandon the camera. On second thought, however, he was convinced that the further he penetrated the thinner would be the smoke. After feeling his way past the sulphur fumaroles and main column of chloric acid his conviction proved correct.

The purveyor of thrills—otherwise the motion picture director—is not above reconstructing earthquakes, which are about the hardest things of all to devise. One was put on in California not so long ago. To produce this nine tons of Judson and black gunpowder was used to mine an area of eight hundred and eighty square feet to a depth of four yards. At the distance of a foot between each two “coyote holes” were dug, in which was placed gunpowder. The herculean nature of the task may be appreciated from the fact that four expert quarrymen had to be employed for ten days so as to place the wires and fill the holes.

The camera men were stationed in various positions at the bottom in order to cover the

incident from all vantages. Their tiny steel enclosed huts protected them from injury, daylight itself being admitted to them through but two holes, one of which was for the lens of the camera, the other for observation purposes. When all was ready the buttons were pressed and the wires attached to the galvanic battery performed their good work. Then the hill exploded with one accord, and for a whole minute volumes of rock and small stones poured down the hill. The clouds of smoke raised by the explosion did not entirely disappear for fully two hours after. At times the players were placed in danger, but happily received no injury more serious than a few bruises. The explosion was so gigantic that people eighteen miles away were terrified and thought that they were going to have a repetition of the 1906 disaster.

The Lubin Company produced a film along similar lines recently, but only employed a ton of dynamite. Four of the eight cameras were worked by electric motors, the operators setting them to work from a point half a mile away.

This company, when producing "When the Earth Trembled," which dealt with the horrors of the San Francisco earthquake, went to the great trouble and expense of erecting the interiors of some of the buildings. This took the stage carpenters weeks, for the rooms had to be built to collapse gradually, in a natural manner. Each set was built in small sections with a wire attached to each. These wires were then pulled one by one, and the illusion was well nigh perfect.

In the Domino photoplay, "The Wrath of the Gods," the director went further in his efforts for realism. In this molten lava poured down the side of the mountain. This effect, however, was secured by using gallons of some chemical preparation. The story dealt with the volcanic eruption which almost wiped out the Isle of Sakura. The Japanese leading woman in this picture lost all of her relations in the calamity. The director, discovering that she was determined to return to her native country, consoled her by re-constructing the eruption and its after effects on the film. Thus does the motion picture director accomplish the impossible.

## CHAPTER XVIII

### PRODUCING A BIBLICAL MOTION PICTURE

WITHOUT exaggeration, the motion picture producer is a clever Jack of all trades, for he will tackle anything under the sun. The fact that he is not thoroughly familiar with his subject matters little since he has the knack of acquiring the requisite knowledge when it will serve him in good stead.

It is, indeed, doubtful whether any class of productions call forth for so much resourcefulness and ability as do biblical photoplays. The producer is only too well aware that if he goes wrong on any point he will surely gain the censure of the church. It might pass muster easily before the average movie audience, but if he can please the clergy at the same time, then he has good cause to pat himself on the back.

The sacred, and, therefore, difficult task the Kalem Company set themselves was the producing of "From Manger to Cross," a film which has received the hearty approval of the clergy, press and public alike in all Christian countries. It has also merited the distinction of being called the greatest religious production of all time.

It may strike you as rather unusual that there was little elaborate planning for its production. It came about in this way: A troupe of Kalemites happened to be making a batch of modern dramas in the Holy Land, and while the leading lady, Miss Gene Gauntier, was recovering from a sunstroke, it occurred to her that it would be exceedingly opportune to film the life of our Saviour. After consultation with her director, she wrote the scenario in five reels.

Somehow or other the news that the picture was going to be produced got to the ears of ten ministers who were attending a conference in Jerusalem. So, to gratify their curiosity, they discussed the photoplay with Miss Gauntier, who surprised them with her knowledge of the Bible. For instance, she

was aware that Mary, Martha's sister, and Mary Magdalene were one and the same person.

When the scenario was completed, all the responsibilities rested on Sidney Olcott, the director. Before he could put on the picture he had to secure the authority of the Turkish Governor General of Jerusalem. This official was very obdurate, but after having given up all heart, Mr. Olcott finally won the day by his persuasive abilities and was free to do what he liked. The Governor, although a Mohammedan, realized the influence the picture would have on Christians and gave Allah's blessing on the work.

The studio in which the interiors were filmed was located between a monastery and a Roman Catholic nunnery. No less than five players portrayed Christ. The first was a new born baby borrowed from its Australian parents who were sojourning in Cairo. The second was a youngster of two, while the third was a boy of eight. In the important parts of the youthful and adult Christ, the director was in a dilemma for suitable types. Requiring also a number of extras for

apostles, etc., he made a trip to London, securing what he required. The young Christ was a boy of thirteen, Percy Dyer by name, who would easily pass for sixteen. The older character was taken by R. Henderson Bland, an English stage actor, who was as natural a counterpart as could be found. He left London for Palestine a few hours after being engaged. On the sea voyage each in turn read aloud from a book on the life of Christ so that all could gain a proper appreciation and reverence for the subject. In fact, Mr. Olcott was so fastidious that he gave them to understand that unless they were able to realise the sacredness and holiness of the undertaking he did not want them for the film. None, however, replied in the negative, and it is safe to say that all lived their parts during the weeks in which filming operations took place.

Every night the following day's work was planned out. The players suffered great inconvenience through the intense heat. Nearly all the settings were produced on the actual locations, while biblical experts, after visiting the museum in Cairo, and inspecting



the old models, gave out exact directions for the stage carpenters for a number of chariots that should reproduce the old; and instruct the costumiers, as well, on the correct dress of the period.

Mohammedans were engaged to participate in the crucifixion scenes; and they did not need much encouraging to produce the desired realism.

Mr. Bland recently addressed a meeting in a New York church when the picture was shown. "I shall never forget the day I toiled along the Via Dolorosa with the huge symbol that has carried the message of mercy through the ages. Great crowds stood for hours in the blazing Syrian sun and numbers lined the walls and covered the roofs of the houses. The crowds around my carriage were so dense that police were told off to keep the people back. When I left the carriage to take up my position in the scene a way was made for me with no word said. Women stepped forward and kissed my robe."

Surely it spoke volumes for his adaptability for the difficult rôle he had to assume.

## CHAPTER XIX

### CONTROLLING WILD ANIMALS ON THE FILM

**T**HE producing of animal feature films is to-day a specialised business. When the movies were young, the producers merely hired what they wanted from some circus or menagerie near by. But these were soon found unsuitable for the purpose.

It was hard to accustom the animals to the extreme smallness of the cinema stage. The result of this was that several film companies acquired menageries of their own and trained the beasts especially for motion pictures.

Companies such as the Selig and Universal have their own staff of animal trainers, while some of the players make a specialty of the work.

It is first of all necessary for them to get on friendly terms with the animals they play alongside. Undoubtedly Miss Kathlyn Wil-

liams is the most accomplished actress in this particular line, for she can handle full grown leopards like cats. But the work is not without its dangers. For instance, in "Lost in the Jungle" she came very near losing her life. She had to stoop down almost on top of a tiger and when it turned round she was to leap behind a projecting rock. The necessary arrangements were made and through some misadventure that arose over a given signal, the animal made for her at a rush. There was no time for the actress to escape and the animal tore her scalp before he could be beaten off by one of the assistants. The gash on her head necessitated six stitches with the surgeon's needle.

It is by no means unusual for the beasts to prove treacherous like this, and the trainers have ever to be alert.

When you see the animals prowling in the African Jungle you can be sure it is somewhere in sunny California. Tracts of land are closed in on all sides in order to prevent the denizens of the forest from escaping.

Like other trades, this has its tricks. In "Samson," Warren Kerrigan was supposed to

break the jaws of a lion with his bare arms. The director had "Jack of Hearts" handle the lion—the tamest one in their zoo—and then leave him. The camera was stopped while the lion was drugged and, without any apparent break in the film, Warren was seen mastering the almost unconscious beast.

"Quo Vadis?" was another example.

In this picture twenty lions are turned loose upon a whole mass of "Christians" in the arena.

The front rank of these supers were composed of animal trainers, armed with revolvers. On the film the lions are seen tearing the "Christians" to pieces; but in the taking of it the lions advanced to a safe distance and were hustled back to their cages. Then dummy bodies were scattered all over the arena and bullock's blood thrown on the dummies. After this the animals were set free and the smell of the blood made them attack the "bodies" ravenously.

It is really wonderful what the director can do with a juicy piece of meat. When you see wild animals trying to knock doors down in order to attack a human being, you

can bet there is a joint hung from a concealed place that the beast is after.

A common trick when beasts leap over a player is to place a dead gazelle out of range of the camera.

Despite all these dodges, the work is far from being danger proof, and you, as a fan, should be appreciative of the thrills that figure in this class of film.

## CHAPTER XX

### WHY NAVAL MOVIES ARE SO SCARCE

**Y**OU may travel far and wide to see the class of films you prefer, and, in desperation, you may apply to the fountain head.

"I want ten cents' worth of thrills and excitement, please," you begin.

"What kind?" the producer would ask.

"Oh, naval dramas."

"Sorry I am unable to supply you, but we seldom produce these."

And if you was determined on ferreting out the whys and wherefores of the case, you would soon be informed that there is considerable difficulty in securing the co-operation of our navy department, without which the successful filming of these movies is not possible. The motion picture manufacturer seldom permits a mere trifle (as he regards it) to prevent him from carrying out his

purpose. But naval photoplays are a different proposition altogether.

The producer cannot, for instance, purchase a battleship as he could a train and make a present of it to old man Neptune. It is going to cost him a million or more dollars, whereas he draws the line at fifteen thousand. There would be a balance on the wrong side of the ledger after that film had been marketed.

A submarine was once loaned to the Imp Company. The action hinged upon the stealing of a safety valve, and when the vessel, manned by the real crew, sank to the ocean's depths, the men heroically gasped for breath. They did not, of course, go through such an experience, for the scenes inside the submarine had to be erected in the studio. Had they been filmed in the heart of a genuine ship the scenes would not have come out clear enough.

The second example was when the Atlantic fleet took a cruise to Cuban waters. On a very slender story the well known "Victory" film was composed for the purpose of featuring the fleet. J. Parker Reed, the director,

fully availed himself of a special permit by acting as commander of the firing operations. He did this from the bridge of the battle-ship *Utah*. Hundreds of marines volunteered in a land engagement for the production. This was not all, however, for Lieutenant John H. Powers took his life in his hands when piloting his hydroplane in the midst of the battle smoke, the smoke burning the skin off his hands.

As a rule, the director is not fond of faking things, but he knows how to do it when it comes to a pinch. He builds up the hull of a battle ship in the studio and fastens it on gliders so that it may be given a realistic and rolling motion. To sink it is another story. This is done by manipulating a battleship model on a canvas covered table. The camera operator films the "wreck," accomplished by electric wires, as it disappears below the table which does duty as the water line. On another day a second exposure is made somewhere on the real sea coast, and by the clever joining of the two negatives, a perfect illusion is produced.



## CHAPTER XXI

### PRESENTING CAFÉS AND HOTELS IN MOTION PICTURES

**W**HEN the motion picture producer puts on a photoplay in which the characters lead a gay life, you can be sure that either a café or a hotel will figure in the most important scenes.

The scenario writer can make his characters do wonders under the influence of wine and lovely women. He finds, also, that hotels are ideal places for misadventures; the characters get into wrong rooms, thus placing themselves in awkward situations.

The director now pays more attention to atmosphere than in the past and obtains the genuine article as often as he possibly can.

The director, or producer, as some prefer to call him, has generally been credited with using soft drinks such as ginger ale in café

scenes, but in the Ince feature production, "The Reward," the director would not go ahead until six dozen quarts of imported champagne, obtained from a well-known Southern Californian café, were served out to the principals and extras in the scene. So there were no half-hearted efforts about the merry making and this improved the photoplay wonderfully.

In putting on "Midnight at Maxim's," the Kalem Company had to represent the interior of this well known metropolitan café on an elaborate scale at their New Jersey studios. But in order that every detail should be scrupulously correct, the employees and entertainers of the establishment were brought over one afternoon.

The employees attended to waiting on the "guests" in business like fashion, the entertainers, all of whom were Broadway favorites, provided a sparkling Musical Revue.

One of Maxim's regular customers is Baron Hand von Ringhofer, who claims to be related to the Emperor Francis Joseph of Austria. He obtains his income from his family in Bohemia, but on account of the

war these remittances have ceased. He therefore turned to the stage as a means of livelihood, and when the news of the Kalem undertaking reached his ears, he pleaded hard to be allotted a part. He argued that unless he was shown in Maxim's the picture would not be true to life. Accordingly, the Kalem Company engaged him.

When putting on "The Dancer," which called for a fashionable Parisian café, the director assigned to produce it by the Universal Company inspected all their properties. Extensive as they were, they proved quite inadequate to meet the special demand.

The director tore his hair and swore like a maniac, but was pacified when the purchasing agent reported that there was a chance to get the necessary equipment at a famous local café which an insufficient trade was causing to shut down.

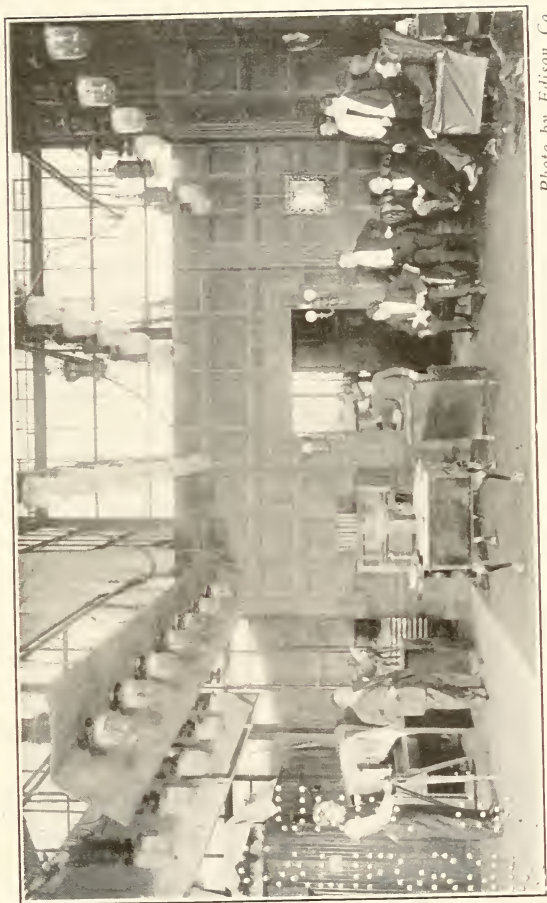
The powers that be, when conferred with, realised that the "props" would come in handy on like occasions; so the purchase was promptly transacted. Before many hours had elapsed, the whole equipment of the café, including chairs, tables, tapestries, linens,

silverware and crockery, was doing service in the delayed production.

Now that the portable arc lamp provides sufficient light for filming purposes inside cafés and restaurants, the director sometimes prefers not to go to the trouble of erecting such sets in the studio.

It is not possible, of course, to take scenes in hotels in daytime without attracting attention. So the Celebrated Players Company decided to have free run of the Alexandra Hotel in Los Angeles in the wee hours. They had not, however, counted upon the peculiar fascination exerted by the movies; and soon inquisitive people in pajamas and kimonos began to peep out of their rooms. The plentiful array of brilliant lamps in the 150-foot lobby made it resemble New York's Broadway on a miniature scale. Scenes were filmed in all parts of the hotel. Too bad to deprive tired humans of their beauty sleep!

The Kalem Company have given another example of their ability to do things on a big scale. In producing "The Mysteries of the Grand Hotel" at their Glendale, California studios, they engaged Arthur Siedle, tech-



*Photo by Edison Co.*

THE DIRECTOR DELIVERING FINAL INSTRUCTIONS TO THE PLAYERS BEFORE THE SCENE  
IS FILMED

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nical director for the Metropolitan Opera Company, to design a magnificent hotel lobby. This has been declared by those who should know to be the most costly and elaborate set which has ever graced a motion picture.

## CHAPTER XXII

### THE DANGERS OF EMPLOYING RED- SKINS AS MOVIE ACTORS

**I**T is only within the last two or three years that genuine Redskins have been employed in pictures. Before then these parts were taken by white actors made up for the occasion. But this method was not realistic enough to satisfy the progressive spirit of the producer.

The Red Indians who have been fortunate enough to secure permanent engagements with the several Western film companies are paid a salary that keeps them well provided with tobacco and their worshipped "fire-water."

It might be thought that this would civilise them completely, but it has had a quite reverse effect, for the work affords them an opportunity to live their savage days over again, and they are not slow to take advantage of it.



They put their heart and soul in the work, especially in battles with the whites, and it is necessary to have armed guards watch over their movements for the least sign of treachery. They naturally object to acting in pictures where they are defeated, and it requires a good deal of coaxing to induce them to take on such objectionable parts.

Once a white player was seriously wounded when the Indians indulged in a bit too much realism with their clubs and tomahawks. After this activity they had their weapons padded in order to prevent further injurious use of them.

With all the precautions that are taken, the Redskins occasionally manage to smuggle real bullets into action; but happily they have always been detected in the nick of time, though on one occasion some cowboys had a narrow escape during the producing of a Bison film.

Even to-day a few white players specialise in Indian parts. They are pastmasters in such rôles, for they have made a complete study of Indian life, and by clever make-up they are hard to tell from real redskins.

They take leading parts, for which Indians are seldom adaptable.

To act as an Indian is the easiest thing possible, for the Redskin is practically motionless.

## CHAPTER XXIII

### MUSICAL MATTERS IN MOTION PICTURE PRODUCING

WHEN the history of the motion picture producer's work comes to be written, there will be a whole chapter devoted to the part music has played in connection with it.

In the meantime, however, you will find it interesting to know just what is being done in this connection at the present time.

The motion picture player, like all exponents of true art, is temperamental to a degree. Furthermore, while the legitimate stage actor has a real human audience in front of him to stir him on, the photoplayer has no such vital element as this to act as an incentive. All there is in front of him is a cold clicking camera and a loud-voiced, business-like director. These are just the very things to put the damper on true art. Yet these are not quite all: the director knows that music in

a comedy, for instance, hath charms; a catchy waltz would help the acting along wonderfully, and a haunting melody could accomplish much in assisting a player to rise to the full heights of an intensely emotional part. It may surprise you to know that one of the big film producing companies regularly employs an orchestra of several pieces to dispense appropriate music in such dramas. May their enterprising move be followed by others!

In spite of all the advantages of the photoplay profession over that of the speaking stage, the longing comes to those who have left the latter to return to it. And so they do. What is the reason, then? You may count upon the regular theatre as supplying half the cause and upon the opportunity to earn applause at first hand as supplying the other half.

The film players are simply delighted when a film story calls for music. Robert Leonard, the Rex leading man, is quite talented as a musician, and when he recently had to act as the conductor of an orchestra he rose to the occasion in a praiseworthy manner.

Probably the most common photoplay situation of all is the drawing room where the heroine enchants the hero by playing the piano and accompanying it with her sweet voice. I have visited a good many motion picture studios in my time, but only once have I been disillusioned. The company in question used a "property" piano minus any mechanism inside. So when the leading lady thumped at the keys, not a single sound came from the instrument and both she and her "lover" had the difficult task of imagining that music was in the air.

The photoplayer cannot know too much and a knowledge of music is certainly an advantage, for although you have no opportunity of judging the tone quality of their efforts, it is easy to judge from the manner in which the players operate the instrument whether they are possessed of more than theoretical knowledge.

The movie stars owe rather a big debt to music, since songs have been written around them and have helped to increase their popularity.

There is, for example, the Kathlyn Waltz

written around Kathlyn Williams, and now "Broncho Billy," Gilbert M. Anderson's character creation, has been immortalised in song.

The producing concerns may be slow in accompanying the producing of films with music, but the leading ones take good care that the movie-theaters put on the plays with appropriate music. To this end they issue music hints in connection with their films. Here is just one example:

VICTOR—Saved by a Dream (Two-Reel Drama).

Reel 1—"Dreams," Wagner; "Dreams of Delight."

Reel 2—"Lyric Suite," Crieg; "Vilanelle Song."

A German producer was so ambitious prior to the war that he turned out a feature photoplay on "The Life of Wagner" and I must say that the film version did him great credit.

The makers of the movies are by no means averse to adapting songs. Who does not remember the production of "Home, Sweet Home," by that master director, David W.

Griffith? It showed how the famous song was inspired by Payne, and the full meaning of the song was expressed so perfectly that the display of handkerchiefs indicated that the spectators were affected. It is one of the saddest and most human photodramas I have yet seen. Of course had it been presented without a first-rate orchestra, it would have been a failure on the screen.

I have recently had the pleasure of seeing a film production of the popular song, "It's a Long Way to Tipperary." It went with a swing from beginning to end, and the song that fits in so well with the somewhat exacting requirements of the motion picture is a priceless pearl.

The verses were thrown on the screen at appropriate moments.

Judging from the present friendly relations between the motion picture and music, it would seem that they are destined to get on even more intimate terms in the future.

## CHAPTER XXIV

### HOW TRICK PHOTOPLAIS ARE PRODUCED

**Y**OU as a movie fan may pride yourself upon the fact that the producer can seldom thoroughly surprise you because you know so many secrets of motion picture producing, but, for all that the type of photoplay labelled as "trick" is apt to be a bit mystifying. You don't see so many of them knocking about nowadays, and few fans ever discovered how they were put on. This chapter tells all about the wizardry of the director.

We all know well the slapstick comedy in which the players indulge in a fast and furious chase. In all reality the players do not move so fast as they seem to on the film. The camera does the trick. Instead of taking sixteen pictures a minute which gives an effect of normal motion, it is made to take about



double the number. This means that the figures on the film move at double the pace of normal life.

Who has not seen a toy doll come to life and walk about like a human being? First the doll is placed in a stationary position and a few feet of photographs are taken. Operations then stop while one of her legs is shifted, which movement is also recorded. The same is done with the other leg, and the movements are repeated until the director gets what he wants. These are photographed on a single strip of film without the stops appearing. When projected on the screen at the usual pace, the doll walks as active as life.

Another effect which caused quite a sensation was that of a man who greatly resented being captured by an astute cinematographer. In revenge, he swallows the camera man and his machine as well. This was done by having the lens of the camera on a dead level with the man's face; and the nearer the man strode towards the camera, the less of his body was visible. At the end, a black hole, representing the man's mouth, was revealed.

This last was obtained in a dark room which contained an open window. The trouble causing operator leaped through the window, clutching the camera. This was filmed. To prevent injury to the actor, a mattress was placed below.

Then there is the steam roller stunt in which a man is run over and immediately gets up as though nothing had happened. It is arranged for the road mender to come to a standstill just as the man is knocked down, then the camera is stopped until a dummy is substituted. This the steam roller pulverizes and the camera is turned until the dummy is replaced by the man. When he so calmly rises the deed is done.

Another clever trick is that of a tired man dressing himself without effort. The clothes travel across the floor from their hooks and attach themselves to him. His hair is parted by invisible hands; his boots and necktie are tied in like manner. The collar also fixes itself around his neck. Let us take one portion of the trick and then we can comprehend the whole. The boots are filmed unlaced, then a stop is made during which the laces

are placed through the first eyelet hole. This process is continued until every eyelet hole has been filled and thus the convincing picture is obtained.

There have also been all sorts of funny things produced such as having the furniture take a trip round the room and the dining table set itself. Many have been puzzled at seeing a bricklayer enjoy his pipe in front of a pile of bricks, which, one by one, fly on to the wall and place themselves in position, thus gradually building the wall. The man is filmed by the wall, but on the other side, out of range of the camera, another man pulls down the already erected wall and throws each brick onto the pile by the side of the first man. By reversing the film, the last picture appears first, and so you are deceived.

If an accidental fall from a scaffold is wanted in a picture, everything is actual until the actor poses for the fall; then a dummy is placed in his place. The camera man then pulls him over by an invisible wire and records the fall. At the bottom another operator is stationed and he gets the incident of

the dummy being smashed to pieces by the impact. All the limbs are then joined together by means of invisible wires and the actor is replaced. Each process, of course, is filmed separately.

Maybe you have at some time or other witnessed wagons, automobiles and men climb up buildings with astonishing ease and rapidity. A piece of painted scenery is placed on the ground and the objects run over it. The camera is operated from up above from a specially constructed platform. When the film is completed the object appears to be ascending a perfectly perpendicular wall.

Perhaps you remember seeing the film in which a bachelor, while smoking at the table, sees a fairy of amazing smallness walk out of the cigar box, and trip over the matches and pipe. Perhaps you have seized upon the idea that the doll trick is used to produce this effect. But it is not.

To accomplish this clever feat the actor sits at the table and imagines what is occurring. Directly to the left of him is a large mirror, while to the direct right is the camera. Sev-

eral feet from the side of the camera is located a second table, on which are matches, cigar box and pipe, each of extraordinary size. The table is proportionately large and on it out of the huge cigar box walks a real life-size actress. All this is reflected in miniature by the mirror and the camera secures it. The result is a perfect illusion.

It all seems so simple, doesn't it? but the work is very tedious and exciting.

## CHAPTER XXV

### "REEL" MONEY MATTERS

**T**HERE is a wide breach between financial affairs on the films and those in real life.

There is a story going the rounds in film acting circles of a young movie actor who tried to pawn his film watch when hard up. But the pawnbroker wouldn't even lend him a cent on it, for he found that the timepiece was merely tin studded with bits of glass to represent diamonds. When playing the "spend-thrift son" the actor could always raise \$100 on it from the film "uncle."

Another leading man will never have his check book on him again when acting before the camera. Recently, for a film, he had to draw a check and hand it to a companion player. By mistake he used his own check book instead of a dummy one. The check, duly signed and written out, was left on the

table after the film had been taken. It then found its way to the wastebin. There it was discovered by some one who realised its value and cashed it. The "star" in question went about for weeks afterwards in dejection over his \$200 loss.

A financier in one film had all the wealth imaginable until the crisis conveyed in a letter told him that he had lost his millions through the failure of something he had his fortune invested in. No mortal man could have made his agony and despair so convincing. It held the audience spellbound to know what the eventful note was about. But the director in his lust for realism played an artful trick on the actor. He knew that he had placed a heavy bet on a horse, so he substituted a real letter for the "property" note, informing the "financier" that his horse had lost.

For a film, another director, after much trouble, came across an ideal hiding place for a modern pirate's hoard. Immediately he ordered sacks of imitation money to be despatched from headquarters, but these unfortunately went astray, and the director was

placed in an awkward predicament. However, he eventually cashed a check for \$450, receiving the amount in silver dollars. He buried these in sacks on the river beach. While busy producing the picture he failed to notice that the tide was coming in fast, so when it was necessary to dig up the treasure, the hiding place was surrounded by water. The director's dismay knew no bounds, and his next few hours were spent anxiously waiting for the tide to go out again. When it did turn, he could not discover the location of the money and a quarter of an acre of the beach was dug up before it was finally found.

The plot in one play necessitates a scene in which two gamblers play cards, and the one who loses leaves and shoots himself. The scenario did not stipulate which one of the players should die, so the director hit upon the idea of having them play a genuine game in order to make the scene appear lifelike. The players spun out the game so long that the scene consumed almost a whole reel of film. Then the director, exasperated, asked why they didn't bring it to a conclusion ten minutes earlier. It appeared that both



wanted to commit suicide, as the man who won had to appear in the film for an hour afterwards, during which time he had to be chased by the police, thrown over a precipice, come to grips with a grizzly bear, be almost lynched by an angry crowd, and then embrace the heroine in the last scene. In the end they tossed up to decide the matter, as "dying" off there and then was preferable to facing all the ordeals in store.

## CHAPTER XXVI

### THE IRREGULARS OF FILMDOM

THE "extra" is such an important individual that no producing company can get along without his or her assistance. And why are these players to be so essential, you might ask.

Some photoplays demand so many minor rôles that the regular company's players are totally insufficient. This often occurs when a big drawing room or restaurant scene is staged. Dancing couples and diners are needed to dress in the scenes.

Extras of a different kind are those who figure in mob scenes.

It must not be assumed that they merely "walk in." Their acting can make or mar a play. The director is the man who drills them into proper form—a no mean task, I can assure you.

The Italian and French producers easily



*Photo by World Film Corporation.*  
 DIRECTING A BUNCH OF EXTRAS IN A WALL STREET  
 PHOTOPLAY



*Photo by Lubin.*  
 TAKING A BATTLE SCENE

THE  
LIBRARY OF THE  
MUSEUM OF NATURAL HISTORY  
AND  
ZOOLOGY  
OF THE  
CITY OF NEW YORK

excel in handling crowds of a thousand upwards in the big spectacular productions, for which they are noted. But their American brothers can best manage fifty or so in a modern drama. I am dubious about the ability of the average British producer because more than once I have seen pictures from them in which the members of the mob were running in all directions as though uncertain what they had to do.

Practically every company experiences great difficulties in obtaining really qualified "extras."

If you imagine that all "extras" play for an income—and an uncertain one at that—you are wrong. Some play for nothing—for one reason or another. Personal vanity is one reason. Such persons gratify their pride since they are able to prove to their friends that they have played in a film.

Others do it for the sake of getting near their picture "idol." You should see how they all scramble to be nearest to him, and the rivalry that exists to perform some little personal service called for in the scenario. It's a sight for the gods!

A no small number are prompted by ambition. They have a hankering to become picture "stars," but first of all have to start at the bottom of the ladder. It is hard to display one's individuality when in the "extra" class, but to do it is the only way in which to attract the director's notice.

When an extra applies for work he leaves his card, giving personal information on the back and also a photograph. Then when the producer is in want of one or more supers, he just runs through the cards and photographs. He selects the types he needs. They then are told when to report for work.

Their payment for a day's work varies from \$2.50 to \$10.

A player such as a maid or butler is not an "extra," for all big film companies have artists on their regular pay roll to undertake small parts like these.

## CHAPTER XXVII

### TAKING EXTERIORS BY NIGHT

**W**HEN you see films in which some of the action transpires at night, do they ever strike you as if they had really been taken during the gloomy hours? I refer, of course, to the gloomy outdoor scenes, for as you are aware, the indoor ones are produced in the studio in the daytime.

If you have been so impressed that you have imagined that they are real, then the artful movie director has but taken you in with a vengeance. "How, then, are the dark effects produced?" you will ask me. Well, the secret is this: These scenes are taken in broad daylight, but before you are privileged to see them on the screen they are dipped into a large tank containing deep, blue dye; that does the trick.

I have, before now, known the director to give himself away by sheer carelessness. In one photoplay, for instance, I spotted a lady

walking along with her sunshade up. Yet spectators were expected to believe that the action took place in the middle of the night.

Another phase of midnight photography that has probably puzzled you is that representing moonlight effects, such as the moon trying to hide behind the clouds, a full moon shining over a silvery sea. The plan in this case is to take the picture at sunset. Afterwards a small round piece of untransparent paper is carefully stuck on to the negative film. A full moon is invariably the result.

But now it is apparent that the death knell of faking has been sounded, for the difficult problem of night cinematography has at last been solved.

In a Bison film entitled "The Brand of his Tribe" there was presented a camp setting in which the fire cast an eerie glow over the darkness. There were also excellent silhouettes of the players. These were taken one moonless night, the middle of the camp being illuminated with a strong violet flame for just two minutes. This lighted up the surrounding country for a good distance around.



A second example was "Stonewall Jackson's Way," a civil war drama by Lubin. In this there appeared a unique battle—new because it was the first time that such details were presented as bombs bursting over snow covered fields, with intervals of blinding flashes of light, while balls of flame were pouring forth from the discharging cannon. Then, too, the staccato points of light were the result of artillery action. It was a dandy fireworks display.

In this production the first problem was to determine the composition of ammunition which should not only be sufficiently explosive but produce a powerful light as well. Edgar Jones, the popular actor-director, had to manufacture a special kind of flashlight powder, and he succeeded after many experiments.

On a wintery night when it was pitch dark the man at the switchboard had a busy time, for it was his duty to explode three thousand bombs. These were manipulated separately on no less than forty thousand feet of electric wiring.

In Imp's "House of Fear," it was neces-

sary for the hero to see everything that took place in certain portions of a lonely country mansion from outside in the grounds at midnight. This was made possible by the newly invented Panchroma Twin Arc Light. Cunningly concealed at the sides of each front window were these lamps, which positively escaped detection when seen on the screen. Each of the lights used turned the scale at nineteen pounds, including the rheostat. They are so easily portable that they can be operated in any house, providing current is available. The lamp comprises a reflector and two powerful arc lights and the carbons are specially prepared to ensure the colors being produced in their natural hues.

The porch lay apparently in broad moonlight, although you did not see the moon itself. Our spasmodic friend would not oblige by revealing herself on this occasion, so the requisite beams had to be supplied by lamps installed in the branches of a tree nearby.

## CHAPTER XXVIII

### EXPLORING BY MOTION PICTURES

**N**OWADAYS when people depart on an exploring expedition they seldom forget to take a motion picture outfit with them. The reason is obvious, for they are then in a position to bring back permanent records of their accomplishments. In the past, as a rule, they returned with a number of still photographs and then set to work to write a book, illustrated with these. Both of these records have their good points, but the film goes one better. That visualises the whole undertaking, which, to view, is next best to being a member of the expedition.

Such pictures likewise possess no little educational value. At different times there have been exploring pictures from hardly known portions of South America, the wilds of Africa, the Arctic and the Antarctic. Indeed, there are very few places on this globe

that have not yet been visited by the motion picture camera.

Yet there still remains a considerable amount of material to be harvested. The one big mistake made by the majority is that they have been content to obtain merely a few scenic subjects.

In all probability the cinematographer commenced operations by touring the locality in search of likely copy. A week or so later he perhaps returned to the same place with the intention of doing the filming, but by this time the objects that had appeared novel and interesting appealed to him as nothing out of the ordinary. Thus, the very matter the outside world was longing to see was lost. He should have taken the pictures as he went along, in which case the new things would have been discovered, invested with the charm that so often means big financial reward to an enterprise of this kind. It is the human interest material that outshines the rest in popularity and this is what, in my opinion, has been neglected down to date.

The explorer who decides to combine cinematography with his other work—hobby as

he no doubt regards it—does so with the object of recovering his travelling expenses apart from adding a substantial amount to his bank account. For film records of his big game hunting tour Cherry Kearton netted \$50,000 altogether. A certain Australian explorer hunted in the North Pole icefields, and, thanks to the motion picture camera, he was richer by \$30,000.

The tastes of movie fans have been greatly misrepresented, for, although we naturally show preference for the ordinary dramas and comedies, we certainly can enjoy a really entertaining educational subject. But it must be good, with nothing dry or didactic. Pictures like Paul Rainey's *African Hunt* and Captain Scott's *Antarctic Expedition* have had long runs, both in New York and London.

Now let us turn to the actual producing of these pictures. Tropical regions give the camera man the greatest trouble, for, unless he is very careful, his stock of raw film will crumble into pieces on account of the excessive heat. He must also develop his produced film on the spot, for the climate would

rapidly deteriorate the negatives. This is why, when Mr. W. H. C. Raymond visited British East Africa, with the object of filming life in the jungle and native customs he had no alternative but to burden himself with apparatus, soda and chemicals, weighing hundreds of pounds. Fortunately, however, he was successful in obtaining 285 natives to carry the heavy load each day through the bush.

As might be anticipated, the work is not unattended with dangers. The Franklin B. Coates' exploration of South America was marked by the failure to get the wild beasts to pose for the movie camera. Mr. Coates was therefore obliged to go after them, and lie in wait for them with a live bait as the lure. After spending two days in the bush in this manner his patience was rewarded by the appearance of a tiger. He had not been long turning the handle of the camera when the beast made a beeline for him. Mr. Coates shot the big cat fatally before his leap could be completed.

Another time this American was lucky enough to film a big boa ten feet from the

camera. The serpent, on hearing the clicking noise of the camera, grew excited and it was thought advisable to kill him before he did any harm.

Before now operators had been killed in this very same game. Far more than the average amount of patience is needed for this work, where practically everything is done on chance.

Paul Rainey, the famous American millionaire sportsman, was mainly responsible for the African Hunt pictures. The best scenes were those taken around a waterhole. On and off, six weeks were occupied in obtaining the film. At one stage he was perched for three whole days on a branch of a tree while the animals came and went below him.

Anyway, fortune favored him, for it was at a time of great drought and none of the animals showed any animosity toward any other. In the film are seen baboons, eland, zebras, timid giraffes, elephants, rhinoceri and lions, all drinking together as peacefully as lambs.

A widely used device is a dummy animal,

in which there is room for the motion picture photographer to carry on his work. The contrivance is so clever that it deceives Nature's creatures entirely, only the clicking of the movie machine giving the game away. This the resourceful operator overcomes by having a motor at work for a fortnight, by the end of which time the wild animals grow accustomed to the noise. Here, again, the photographer must reconcile himself to weary waits in order to study the habits of his subjects. But there is no other way to secure films so perfectly true to nature, and results, therefore, justify the trouble involved.

The denizens of the jungle, as is commonly known, have a strong sense of smell, and to mislead the beasts, it is necessary for the traveling cinematographer to smother his body with some vile smelling liquid.

The natives frequently present another difficulty. Once some native thieves in Central Africa smashed a motion picture machine to atoms, in their belief that it contained valuables.

Even in colder climes, like the Arctic and Antarctic regions, the work is equally hard.



The climatic conditions render film taking very difficult and perilous. Nevertheless there have been some excellent pictures from both ends of the globe at different times, the most extensive collection having been obtained by Mr. Ponting of the ill-fated Scott Antarctic Expedition. Had he not been hampered with the heavy apparatus, he would have accompanied the unfortunate Southern party in their final dash. As it was he came back with some remarkable records which deserve to be preserved at a museum. All pictures with a permanent value should be treasured for posterity's sake for, by the magic film, the dead, past events and accomplishments can be brought back to life again.

The motion picture has undoubtedly succeeded in affording us an insight into life and lands we hitherto knew little about.

And it will continue to do so until every particle of the world shall have come under its ever eager eye.

## CHAPTER XXIX

### HOW MICROBES AND INSECTS ARE "CAPTURED" FOR MOTION PICTURES

WHO has not marvelled at the films often seen at the better class of motion picture theaters, in particular the films revealing some of the hidden secrets of nature,—laying open the activities of microbe and insect life? Films of this sort are as genuinely entertaining as comedy or drama.

It is easy for some learned professor to write a book on insect life, but the man from Missouri spirit is deep within us, and when we can be shown these things we find them doubly interesting. In saying this I do not infer that books are of no use. That is foreign to my thought. They undoubtedly add to our store of knowledge, but when we can see the things before our own eyes we come to a fuller understanding of the subject presented.

Professors find that writing books or de-

livering lectures as the outcome of their personal observations and experiments are easy tasks in comparison with getting microbes, germs and insects to pose specially for the motion picture camera.

The leading worker in this end of the film industry in America is Professor Raymond L. Ditmars, Curator of Reptiles at the New York Zoölogical Park. His great film, "The Book of Nature," has commanded widespread attention, and deservedly, too.

But let us begin at the bottom of the ladder and commence with films dealing with germs and microbes. These, in a disinterested kind of way, tell us to be on the lookout for diseases. They are so realistic that they are often used by surgeons and physicians to assist them in their work, thus serving a two-fold purpose.

Well, the question is: how does the modern wizard—the motion picture producer—"capture" them when we ordinary mortals are denied seeing them?

To satisfy your natural curiosity, I may say right now that the lens of the motion picture camera is focussed through a microscope

which magnifies objects from two thousand to seven-six million times. The French companies who make a specialty of the work have fully equipped laboratories in which trained scientists prepare subjects for the film. Their work necessitates plenty of research, while much patience is involved in taking the films themselves.

The most exasperating thing about germs and microbes is that they persist in moving about in groups and have no respect for the limited area covered by the camera's lens.

The photographer, to avoid this, generally contrives to have them appear against a black background. The light at the sides is of two thousand candle power and this is of only just sufficient strength for photographic purposes. To make it stronger would kill all of the objects. The rays of this light are conveyed to the lens of the microscope.

It is extremely hard to catch a spider in the act of weaving a web, so when the producer locates a suitable female he places her for a few days in a specially constructed box, painted black. That period suffices to get her used to her surroundings. When her

young have been hatched she guards her nursery. This is the time for the director to wreck her painstaking work. The mother plainly shows her grief, and to comfort her frantic babies she commences to weave an even better web. During all the time she is working so industriously, the camera is only a few inches away, recording her actions for the benefit of the outside world.

Ants make bad motion picture actors, for they are so intent upon having their own way that they refuse to do things naturally when they spot the camera at work. This is attributed to their high degree of intelligence. The director has to track them unawares to one of their tiny hills. Here he places a throbbing motor engine. A few days of this serves to put them off their guard, when the motor is used to turn the crank of the camera. They then pay no attention to the perpetual clicking.

Once a producer tested whether grasshoppers were emotional or not. He proved that they were when listening to the strains of ragtime, for one was so deeply affected that he fell ill and died.

Professor Ditmars once attempted to show the Katydid's peculiar method of singing. To realise the difficulties which he had to combat, it must be understood that this insect only indulges in music at night, that if he sees a light, his song ceases right then.

This difficult problem was solved by freeing a score or more katydids in a group of oak trees. The camera was then placed on a tall tripod and equipped with a long focussed lens. It was therefore comparatively easy to concentrate filming operations on a low hanging branch of the middle tree from a good distance away.

The insect, however keen detective he was, couldn't detect the operator, for the crank was turned by a distant motor engine.

Ah! What about the light? The camera man used a powerful searchlight focussed on the spreading branches of the tree.

The wisdom of distributing a group of the insects in the trees was then shown, for those in darkness sang lustily.

The king of all, upon whom the whole results depended, hesitated as to the course he should pursue. Evidently his companions

prompted him to sing under the limelight, for before long his wings moved in musical order and the "Katydid, katydid" chorus was duly recorded. The pity was that the notes could not be heard by those who saw the film, but to SEE one sing was a privilege indeed.

Fancy filming a dragon fly in full flight! Impossible, you will assert, but a French invention, the electro-sterio-chronophotograph, has rendered it an accomplished reality. Motion pictures, in the ordinary way, are taken at the rate of sixteen per second, but by this device the rate was increased to two thousand on one occasion.

The camera man let the flies undertake the actual filming on their own account, a shutter contrivance making the feat possible.

It was imperative to gauge the speed of flight, so a tuning fork which doubly vibrated fifty times per second was employed. Each double vibration set a magnetic signal in motion, so all the photographer had to do to detect the speed of flight was to total up the pictures taken during each double vibration of the fork.

Underwater insects have also been filmed.

These are usually captured by placing an observation chamber in a pond or river. The top of this projects a trifle above the surface and the operator enters the chamber. After this he sees that the top is covered so that the light is prevented from entering. He then places his camera against the plate glass window at the side.

The insects, by this device, are completely thrown off their guard, for they see nothing but a black patch, and the cinematographer, therefore, gets pictures that are perfectly natural.



## CHAPTER XXX

### THE OBSTACLES ENCOUNTERED IN FILMING ROYALTIES

THE animated newspaperman is no respecter of persons. Naturally, over in Europe, the greatest scoop he can secure is a rattling good picture of an event in which royalty has participated. It is no ordinary proposition, for barriers which are practically non-existent on other occasions soon begin to present themselves.

Royalties are like gold—precious—and this being the case they have to be zealously guarded. How are the authorities to know that the motion picture camera and the man operating it from a prominent position are not a cloak for some outrage? False credentials have been used before now to gain some object.

British royalty probably enjoys more freedom than that of any other nation, though this is not to say that due precautions are not

taken. When a royal procession or an event in which royalty takes part is held, the route they intend traversing is generally announced beforehand. This affords the cinematographer scope to select the best position. But other operators employed by other producers are doing the same thing, so he and the competition is keen. I have known instances—and they are by no means rare—in which crank turners have made a rough and ready sleeping place of the best position they have discovered and mounted guard over this all night with their trustworthy camera so as to be on the spot the next day. Then when the policeman comes around, they have to get an O. K. on their credentials.

When the King and Queen attended an important horse-race, it was rumored that the militant suffragettes would make an attack on the Royal automobile, so every suspicious character was kept out of the way. The police even forbade cinematographers to be in attendance. The latter fact got to the ears of King George, who forthwith had the ban removed, for he is an ardent admirer of the motion picture and realises that the camera

men perform a public service. If questioned, he would no doubt figure it out in this way: "Only a few thousands of the millions of my countrymen throughout the world can see the part I play in this event, but a motion picture can convey it to all my loyal subjects, whether they reside in Scotland or Australia. It is, in fact, next to seeing the thing."

In Germany, red tape is a greater evil. The operators are asked the most searching questions by the authorities and have to make the best they can of the position, which is seldom satisfactory, allotted to them. They also have to promise not to export the film without submitting it to be deleted of military information of any value to a foreign power. These rules were in force before the war, but what they must be like now is something to conjecture.

The films taken under such conditions are not even allowed to be shown in their unaltered state in the Fatherland, for a certain film company unknowingly infringed the rule. The picture which caused all the trouble depicted the entry of the Emperor William's daughter and fiancé into Berlin. This was

put on at the Berlin movie shows on the same evening and the police intervened and confiscated all the copies in circulation. It really makes me wonder whether some of our high and mighty censor boards are imitating the foolish German method.

Russia has long been recognised as a country where the iron rule is felt in all things. Such has proved the case with the motion picture. The Czar evidently values his dignity highly, for the masses of the nation have always been kept at a safe distance on his appearances in public.

Although the cinematographers are now more greatly restricted than was the case in the past, I do know that when a monument was erected to the memory of Alexander III in Moscow, a dauntless operator succeeded in filming the Imperial Family at as close a distance as three yards—a feat which has never before been accomplished at a Russian official ceremony.

It has now been discovered that motion pictures of these events tend to place the Emperor on quite intimate terms with his subjects.

The Russian Ministry of the Interior has taken action by laying down new rules for the showing of films of this class. To begin with, each film must be seen by the Court Minister before it can be publicly displayed. If it passes him, the theaters running it are not permitted to play music, not even the National Anthem, while it occupies the screen. Next, it has to be announced on the program as a special item. Thirdly, to distinguish it from the other pictures, a curtain must be lowered beforehand and go up when the film comes on, the process being repeated at the conclusion. Rules like these would drive an American exhibitor—or any American for that matter, with a positive dislike for formality—to distraction.

## CHAPTER XXXI

### FLORICULTURE BY MOTION PICTURES

**Y**OU may exclaim, on glancing at this title, "What have motion pictures to do with floriculture?" Let me say here that the benefit is mutual that they should be allied in the way they are and are going to be.

Probably, at some time or other, when you have visited a photoplay theater, there has been a film on the program of the educational order. As you saw the speeding up in the growth of a plant you wondered whether you were really dreaming. For if crops could be raised at such a hustling pace, any grower should be able to retire from business affluent in short order.

To see the whole life of a plant on the magic screen within the space of five minutes or so is nothing short of marvellous, because Dame Nature never permits herself to be revealed at work. How is it done, then?

Surely the whole thing is a sham. Not at all, believe me.

A motion picture director, on selecting a flower to picturise, say from seed to blossom, begins at the right season, with special lens attached to the camera. The seed is first sown in a transparent pot so that the roots can also be filmed. When it has developed into a sturdy seedling, suitable quarters are found into which it is transplanted. From the time the seed germinates, the motion picture machine photographs its growth at fifteen intervals during the day until the subject is completed. When the finished film is pruned down to a market length and explanatory matter added, it appears that the film magician has stolen a march on Nature with a vengeance. It is the showing of these separately taken pictures in rapid succession that gives the perfect illusion. There is a film now showing that displays how plants are attracted by light and turn away from dark places. As you can appreciate, the work involves an enormous amount of patience and failures are by no means unknown.

The French producing concerns make a

specialty of this class of motion pictures. They produce them for the good of the cause of cinematography rather than in hopes of financial gain, for, as yet, educationals are not a particularly paying proposition. This explains why our producers present them only now and then.

To obtain the fullest worth out of movies of this sort the plants must be reproduced in their natural colors. There are certain processes whereby the colors are painted in by a stencil process afterwards. This is not a true-to-life method, for the tints are liable to run into each other and may not be of the correct shade.



## CHAPTER XXXII

### WHAT MOVIE CAMERA OPERATORS HAVE TO UNDERGO

A GREAT deal has been written on the exciting experiences of picture artists, but little is known as to the perils faced by that small body of men who grind out pictures.

Some time ago the British and Colonial Company sent Mr. Fred Burlingham, their camera man, over to Switzerland for the purpose of filming the Alps. All went well until he commenced photographing the Giant Plough at work on the Bernina Pass. To obtain good views, the motion picture machine stood in the track of the Plough. Mr. Burlingham took the precaution to make arrangements with the engineers to stop the Plough a short distance in front of him. Instead of doing so, the B. & C., to the horror of the operator, drove it almost over him, and it was only by quickly leaping aside that he

managed to throw himself against the walls of the pass as the machine steamed by. His body was badly bruised, while the camera was smashed to atoms. It transpired later that the engineers could not see him on account of the fact that they had been blinded by the snow.

#### FILMING THE MATTERHORN

Another adventure occurred to Mr. Burlingham when he filmed the Matterhorn at the dizzy height of 14,000 feet. It was done at the point from which Lord Francis Douglas and three more of the party fell in 1865 to their death. While the camera man proceeded with the filming, he had a man below hold his legs, which enabled him to maintain his balance.

The American Company once took some scenic films in the Hawaiian Islands. Water buffalo are there used as draft beasts in the rice fields, being the only animals that can travel through the heavy muck. The camera operator had just started taking the film when a buffalo charged him. He had to dodge as best he could behind the camera and managed

to evade the animal until a native came and rescued him, thoroughly exhausted after leaping about in the ankle-deep mud.

Pictures with explosions in them are the terror of camera men. Mr. Albert Heimerl, of the American Company, confesses that he never came closer to his death than he did on one occasion in which he was filming a scene of this sort. Both he and the camera were protected by a temporary shelter. One hundred and fifty feet away from him were one hundred pounds of black gunpowder and thirty sticks of dynamite. Calculations went wrong, as the explosives proved too much at such a short distance away. The top of the shelter was struck by a three hundred pound boulder, the camera was smashed, and the operator buried under the débris. He was unconscious when extricated, and could not be up and about for several weeks after.

#### ACTING THAT WAS NOT WANTED

On the Kalem Company's last visit to the Holy Land, the camera man found himself in danger. He was filming a scene in the desert near Luxor. Suddenly a gang of evil-

visaged Bedouin warriors appeared, and eyed the camera with great curiosity, not having seen one before. But the chief was an exception, for he proudly stated that it was his will and pleasure to pose before it. Not content with that lordable ambition, he wanted to appear in the scene in the part of one of Kalem's "stars" whom he had seen acting as he entered. It was useless to expostulate, as the manner of the Sheik and his followers became very threatening, so they humoured him.

When he was ready, the camera man turned the handle of the machine, then the chief strutted and postured before the camera like a Turkey cock. The funny part about it was that the apparatus contained no film to record his efforts for posterity's sake!

## CHAPTER XXXIII

### TAKING THE ANIMATED NEWSPAPER

THE camera man whom I am now going to report has had European experience in addition to American; he is now a "star" man on one of our animated newspapers.

"People tell me that mine is an easy job, with nothing to do but turn the handle of the camera," he remarked to me recently. "Let them spend a week with me and they would get an entirely different impression.

"I remember my first commission as though it were yesterday. It was to film an important baseball match, and to obtain some good photographs I placed my machine right in front of some fans, thereby obstructing their view. They first began passing uncomplimentary remarks and I was foolish enough to argue with them. Before I could grasp what was happening, handfuls of mud and the like

were thrown at me and soon I was smothered; then I beat a hasty retreat.

"On returning later for my camera I found it smashed beyond recognition. This lesson taught me to move away to another pitch as soon as a crowd shows the least sign of anger.

"A balloon ascent was my next eventful time. My orders were to go up in the balloon to take some scenes in mid-air. Well, I did, but the wind was so strong that it blew us against a tall tree in a field. The collision was so violent that it nearly tore off one of my fingers; the gas envelope burst and we descended to earth at a rapid pace. For the next few days some one had to take my place, so indisposed I was.

"Once an important event at a big factory sent me there on business. I thought it was going to be a 'tame' affair, but it proved not so. The workmen angrily protested against my filming them, giving as a reason that they were made a laughing stock by their friends when they had been seen on the screen before. To miss this event would have cost me my job, so I defied them. I only piled up the trouble, for the men immediately threw down

their tools and went on strike. The rage of the boss knew no bounds, but the strike scenes I secured were well worth it.

"Now to proceed to some of my experiences in England. You have no idea of the competition that exists among us cinematographers. Do you know that on the occasion of the Royal visit to Henley I lived the night before in a canoe on the river in order that I should get the best position by the Royal pavilion? I have also slept on Epsom Downs so as to be in readiness to obtain some typical early morning scenes as soon as Derby Day dawned.

"Like our newspaper brothers, we camera men have to hustle. The taking of the Derby film—England's classic race—will give you a good idea of the hurried nature of our work. I am stationed by the winning post and I record the actions of the horses as they stampede past. I then gather up the camera and tripod as fast as I can and dash off to the waiting auto a quarter of a mile away. It is no easy work to push through crowds, especially when burdened by a heavy camera.

"All my companions are waiting for me

and we are off in a jiffy. Fortunately there is not much traffic to hinder us going back and we make the twelve mile journey to our London works in less than an hour. We then dash up to the dark room, where we speedily develop our negatives and are spared the remaining processes. When I walk into the local movie theater three quarters of an hour later and see people enjoying my work on the screen, I feel mightily pleased, I can tell you.

“So you see, our work is not child’s play.”



## CHAPTER XXXIV

### MAKING CARTOONS FOR THE MOVIES

**T**HE secret of the making of the movie cartoon has seldom been divulged, for the producers have objected to its becoming known on the grounds that their competitors would imitate a special and particular process. This, and this only, is the reason for official silence on this matter.

Those who have come forward with solutions of the mystery say that the drawings are thrown on a silhouette screen, another camera being used to film them.

Number two discovery is that a mannikin is used, manipulated by invisible strings.

Yet another asserts that moving cardboard figures are photographed.

It so happens, however, that none of these solutions is correct. How, then, are the cartoons made? Let me tell you that there are

different processes adopted by the various studios.

You are, of course, familiar with the Colonel Heeza Lair series, released under the Pathé banner. The creator of this series is J. R. Bray, a newspaper artist of note. His is a patented process which has been imitated by other motion picture cartoonists.

Mr. Bray experimented for several years before he invented his speeding up process and he now works with the assistance of a talented corps of artists.

Before a single reel, one thousand feet, is completed, Mr. Bray has to sketch between four and five thousand outline drawings on tracing paper. These are then inked in by four artists, after which a week is consumed in photographing them. To make even one error with the pen would ruin the whole film, so all have to take great pains over the exacting work. The drawings, when seen on the screen, have also been enlarged twenty-five times since they were executed by the artists.

The method followed by most studios is to draw each "move" on cardboard, and then

place the boards together one by one. After this they are separately photographed. It is the showing of these in rapid succession that gives action to the cartoons.

But the plan is so tedious that the preparation of each drawing occupies upwards of twenty minutes, hence the reason why the output of one cartoonist seldom exceeds two hundred and fifty feet weekly. There is also a considerable amount of time consumed in planning out a subject.

## CHAPTER XXXV

### TAKING FILMS UNDER THE SEA

THE Williamson Submarine motion picture invention has conquered a region to which the cinematographer did not previously have access to. I admit there have been pictures, ostensibly taken under the sea, but these pictures were deliberate fakes. In a recent nautical drama I saw two divers fighting for life for sunken wealth on the ocean's bed. The deceiving feature about it was that the divers went down from a boat on the real sea. But between the filming of the scenes above and those underwater, an interval of several days occurred. Expert divers were hired for the former work, the latter being left in the hands of the actors. Some film producers have a glass tank lake in their studio so that they can put on such spectacular scenes.

The first film produced by the Williamson Brothers was in five reels. It depicted coral reefs, peculiar fish and marine forests in the region between Nassau and Watling's Island. Native boys were also shown diving and swimming under water in search of coins thrown to them by passengers on the ship. J. Ernest Williamson, the inventor, engaged in a fierce fight with a man-eating shark, with a knife as his only weapon. Both he and the camera man, Carl Gregory, nearly lost their lives, for the animal was despatched just as he was making a terrific drive for the glass-enclosed photographic chamber.

The maximum depth at which the submarine tube invention can be safely used is one thousand feet. The steel tube is wide enough for two men to pass each other while ascending or descending, and water is kept out by an inner covering of rubberised cloth. Air is pumped down, allowing the operator to work for hours at a stretch. The photographic chamber is at the end of the tube. This is hollow and is made of steel, and is five feet in diameter. Reaching out from the chamber is a steel funnel whose outer end is

closed with a sheet of glass, five and a half feet in diameter, and two inches thick.

It has been discovered that the further down the pictures are taken the more precaution is necessary against the enormous pressure of water on both sides. This is managed by closing the inner end of the funnel with a steel door, into which two glass ports are fitted. These two glass ports are three inches in diameter, the top one being for observation purposes, and the bottom one for focussing the camera. As a further guard, a sufficient amount of compressed air is pumped into the funnel, between the outer glass and the inner door to balance the water pressure from outside. The camera man is pretty well protected against the unexpected, for there is a small steel shutter which blocks out the two port holes. So if the outer glass broke, the operator would be perfectly safe.

The pictures taken by this method are not marred by bad photography, for there is a lighting device which makes it possible to obtain clear views at depths and in places where there would not be sufficient daylight. A wire connected with an electric battery on

the ship is lowered above the photographic chamber. At the end of the fuse is a metal submarine globe containing eight mercury vapor lamps which have a twenty thousand candle capacity.

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## CHAPTER XXXVI

### THE MOVIE SOLDIER AND HIS WORK

**L**IKE his brother in real life who has to face death without flinching, the picture soldier is a man we really cannot do without. True enough he is the bane of the director's existence, and there is nothing more harassing to him than having to get his men into fighting trim. They are, as a rule, such a motley crew that plenty of patience must be the virtue of the "knight in command."

The producer is as happy as an angel if he can hire his extras from some military force located near-by, for then, since they are already trained, all he has to do is to rehearse the play itself. But, unfortunately for him, it is only now and then that he is able to do this. When it is imperative to fall back on the raw material a troublesome time is his lot.

In America most movie soldiers earn five dollars per day. The average extra regards



the work as secondary, the wage envelope being the first consideration.

A good many, however, do not relish the idea of "dying off" early in the scenes. It is such a tiresome process, especially if you fall down in an awkward pose and badly want to change to a more comfortable one but can't. Even if you feel like retaliating when your brother extras pass over you none too gently in the scrimmage, you mustn't.

A stray shell, though not in the least harmful, may quite possibly deal you a blow. It is recorded that on one occasion a rebellion occurred when a battle drama was put on. A number of "soldiers" frowned on the idea of having to retire early in the encounter, and upon the apportionment of only one or two cartridges which the director had served out to them to this end. The men who had to survive the picture came in for a rather rough time at the hands of their less fortunate brethren, who fought to gain possession of the cartridges. The situation being more than the director could cope with, six policemen were called in to restore order. Eventually the supers were persuaded to carry out

the original instructions. When extras are recruited locally it often provides them an opportunity for paying back grudges harbored against some neighbor. Some are so clumsy in wielding their weapons that their fellow players get seriously injured.

Since the European war started producers have had a busy time supplying the demand for battle material. There is a story told of a director in England who sent a hurry call for a squad of picture soldiers. One who had served in the British Army, when told he had to be a "German Officer," asked, indignantly: "And what recompense?" On being told it would only amount to a dollar and a quarter he was so offended that he muttered something about not being a German at any price and hastily left the studio. He kept his word, too!

An English coast town street was the scene of another war-time incident. Dressed as an ordinary soldier, an extra passed a real lieutenant, who, finding his inferior (as he thought) did not salute, stopped him, saying, reprovingly: "Are you not aware that you must salute your superior officers? And

what company are you in?" The recruit was taken back for a moment. When he had recovered sufficiently, he replied, "The B—— Kinematograph Company."

In rehearsing his men the director delivers his instructions in studio slang and when a portion of explanatory matter has to be inserted in the film, he calls out, "Hold it!" meaning holding back the play for a minute or so. One new extra delayed throwing the smoke bomb he held in his hand, for when the "Hold it" command came he was silly enough to act accordingly. It cost him several weeks in the hospital with no pay.

Even in filmland the practical joker is abroad. In one picture some casks of "gunpowder" had to be gathered, supposedly to explode a mine. Before rehearsals one extra, smoking a pipe, calmly sat on one of the barrels, which incident was observed by the witty one.

"Hey! Bill, you're smoking on a cask of gunpowder," he shouted. This naturally caused the extras close at hand to make a bee line for safety, but Bill continued to sit on the barrel and smoke.

"Put out your pipe, man. You'll blow us all up," said one. At this, Bill grinned and everybody was horrified to see him knock the ashes from his pipe on to the top of the barrel. "It's all right," he said cheerfully, "it's only a cask of beer."

For all his faults, the movie soldier certainly makes us sit up and take notice when we see his work on the magic screen.

## CHAPTER XXXVII

### WAGING A MOVIE BATTLE ON THE EURO- PEAN WARRING POWERS

FOR gallant deeds on the battlefield soldiers are rewarded with medals.

But take the case of the cinematographer at the front. His activities practically forbidden by the warring powers, he defies all regulations, censorship, red tape and forbidden areas, and takes pictures under the greatest risks.

But what does he care when the interests of us movie fans are at stake? It fills him with the spirit of adventure. So is he not really as deserving of honor as those with the fighting forces? His daring places him under as great and as many risks as they endure, and yet he seldom receives the appreciation he deserves.

When this war is over a fund should be col-

lected at the theaters so that those who have distinguished themselves at the theater of war shall be awarded medals for their pluck and resourcefulness. The very least we can do now is to take off our hats to the camera man whose exploits I am now going to relate.

First I will introduce the Universal Squad. One of their photographers had to go through the ordeal of being captured by the Belgian authorities and made to stand for five hours with a bayonet nibbling at the middle of his back. Another, Mr. J. M. Downie, was more fortunate. He had friends in the Belgian and French armies and enjoyed a certain amount of liberty and special privilege. He was the last cinematographer to leave Antwerp before the advent of the Germans, and secured some remarkable scenes of the siege. He took his pictures of bursting shells from the inside of a cart. But he was faced by a greater difficulty, for it is the rule that all film be censored before it is sent to England and the authorities deal out severe treatment to those who are caught smuggling.

Two more of their men working together

experienced such a loss. First they were apprehended as spies, then freed, and good fortune favoring them, they gained access to a battlefield. They soon busied themselves filming a German cavalry attack on the Belgians, but a flying bullet ended the career of one of their cameras. In shifting their position they openly exposed themselves, and to get out of the way of the charging cavalry, fled, leaving the contents of the damaged camera behind, much to their regret.

The other camera contained a thrilling film. They got away with it on a train which was so full that they had no alternative but to ride on the engine and on the front of this they carried their apparatus as though it were gold.

At the station when they alighted a policeman accosted them; they made an attempt to escape, but were captured. Then the undeveloped film was inspected despite their pleadings. Of course, every bit was spoilt and their labors were in vain.

Pathé Freres fared better, for they have been appointed official cinematographers to the French army. Even so their Mr. H. A. Sanders had enough excitement to last him a

lifetime. When he wanted to get to Ostend after hearing that the Germans were approaching Ghent, he boarded a motor car containing some Belgian soldiers. To add to the danger was a Union Jack which the auto flaunted: A patrol of German cyclists soon pursued them and to get out of danger's way the chauffeur put on full speed, caring nothing for brakes, ditches or any other obstacles. They effected a safe getaway.

Mr. F. Scales, another of their gallant representatives, took up a position so close to the Belgian guns during a big battle on the Scheldt that he was warned to leave. But he still kept to his post and it was only by threatening to destroy his film that they finally got him out of the way. Some realistic close up views of firing shells were the fruits for his bravery.

J. C. Bee Mason, an English cinematographer, managed to travel with the Belgian army for six weeks, during which time he obtained 6000 feet of film, most of it being taken on the firing line from unique positions.

One day a Belgian refugee approached him excitedly and thinking he wished to pose be-



fore the camera Mr. Mason endeavored to persuade him to stand against a wall. But the native anxiously pulled Mr. Mason a considerable distance away, and the next minute a shell caused the wall to collapse. It was a near go, but Mr. Mason had an even closer shave than this. One night while sleeping in a farmhouse in Grembergen the place was struck by German shells. He hid under the bed, clutching his precious camera, fearing for it if the roof should fall in. Luckily nothing eventful occurred.

When the Germans entered Ghent, Mons. Bizeul, an Eclair camera man, exposed himself to great danger by securing a second floor room in a café facing the town hall. There he patiently watched developments and as the section of German army filed past for one and a quarter hours he manipulated the camera by letting the lens pass through the slightly opened window.

A certain free lance American cinematographer was arrested as a spy by the Germans, but after his identity was proved he was released only to fall into the hands of a French sentinel, who thought him to be a German

spy. For two days he was kept a prisoner and when the French came to realise that he was an American on business they freed him. The camera man, in the first place, invited suspicion by running about from place to place whereas he should have proceeded cautiously.

Just imagine the risk involved in travelling over forbidden ground where one had to hide amongst provisions in a freight wagon attached to a train when all bridges and stations were carefully guarded. This is the risk taken by a young Englishman, H. S. Hibbart, by name, in order to film the Indian forces at the front. Here he was arrested and his camera and film confiscated. Through the instrumentality of a journalistic friend of high standing he was deported to England under the charge of eight armed guards. The journey to Paris took 38 hours instead of two and the menu comprised "bully" beef, bread and jam. Later, however, his filming apparatus was returned to him safe and sound.

Cherry Kearton made many attempts to film exploding shells at the Battle of Alost, but he found that they were barely noticeable on the screen—there was a flash and that was

all. When the flying fragments of one strikes a soldier, he slips forward a little and stirs no more.

There are no dense volumes of smoke and the soldiers do not fling their rifles up in the air, and die in a pose; such films, Mr. Kear-ton declares, are fakes. In warfare to-day smokeless powder is the only kind used, for it is the only kind which does not give the position away to the enemy.

Pathé Freres operators had their cameras equipped with a telophoto lens, by the aid of which it was possible to cinematograph soldiers at work in the trenches at a distance of six hundred yards. This is how the Pathé men succeeded in getting their unique and intimate views of the fiercest fighting, for the ordinary lens is limited to a range of two hundred feet.

Most other camera men have dispensed with the cumbersome motion picture machine and instead used an Aeroscope camera, which is minus a tripod and therefore easy to carry about. But even this does not do away with all the difficulties. Mr. Mason will back me up on this statement.

To keep the camera steady when carrying out his work he was obliged to adopt sundry plans. The most successful one was to strap the camera to the trunk of a tree, which also afforded protection for the operator.

At another time, wanting to obtain pictures of the Belgians fighting in the trenches, Mr. Mason laid himself flat in the middle of the street and held the camera up in front of him.

His one great scoop was some remarkable panoramic views of the Germany army. To obtain these he attached a coil of wire to the movie machine, tying the other end to a button on his coat. He then climbed up a telegraph pole and after reaching the top he tugged at the wire and thus got the camera up safely. The final operation was to hold it tightly and focus the camera on the magnificent sight far below, ahead of him.

Paul Rader, a plucky American, managed to film pictures of an artillery duel between the French and Germans, after which he rushed to the nearest vacated house and hid both camera and film in the cellar. A few days later, when the fighting had shifted to

another part of the country, he returned for his belongings and was successful in eluding the vigilance of the authorities on his journey to the coast, en route for England.

## CHAPTER XXXVIII

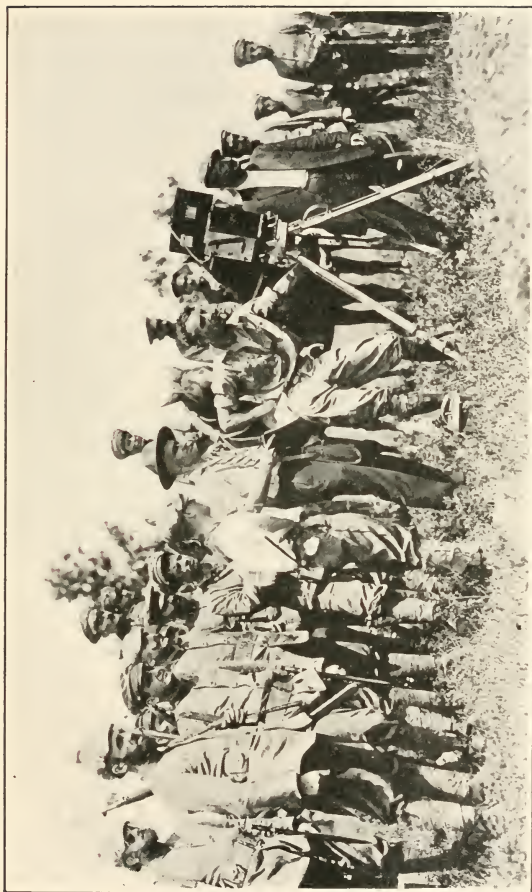
### THE MOVIE FIRING LINE IN ENGLAND

**W**AR brings changes in its wake. The motion picture producers, after Britain entered the European conflict, unanimously decided in favor of war photoplays.

Their judgment may have been faulty at the time in neglecting to take the thoughts of millions of fans away from the war, but the craze for the one thing spread like a boomerang. It was here, there and everywhere and you could not escape it anyhow. So why criticise the producers for following the fashion?

The producers, when war was only in the air, found their extras disappearing suddenly. They soon woke up to the fact that they had been employing Germans to act as British soldiers.

These movie armies made good their losses by securing the services of laborers of all



*Photo by Lubin Mfg. Co.*  
DIRECTING A BIG SCENE IN A DRAMA BASED ON THE EUROPEAN WAR





kinds on Saturday afternoons and Sundays, the manual labor of their everyday work fitting them physically for their parts.

This mania—for it was nothing else—for war material compelled the stage costumiers to work overtime to cope with the demand for uniforms of the various warring nations. A director friend of mine wanted to equip a British force in khaki, but the required color was not obtainable for love or money. Bless your heart, there are more ways than one of getting over the situation. "Who would detect," he argued to himself, "whether the uniforms were blue, green or red?" So you may rest assured he is mighty thankful that the day of natural color cinematography is not here yet.

You would, were you to inspect the studio grounds of the Barker Company, be inclined to think that you were somewhere in Belgium on the firing line instead of in a peaceful London suburb.

Trenches have been dug and a row of "Belgian" houses is located at one end, while a Red Cross Hospital is located at the other. Then you will probably see an auto bus con-

taining sixty soldiers in khaki about to proceed on a trip for some special scenes.

To show shells exploding presents both difficulties and dangers. The effect is produced by burying land mines in the ground and setting them off by invisible electric wires. I heard quite recently that one of these not only produced a miniature earthquake, but sent *débris* in the direction of the camera man and broke many windows in the studio close by, besides necessitating many repairs to the roof. The noise produced harmed the hearing of members of the producing forces, many having to wear artificial ear drums in consequence.

The war, however, is going to prove a lesson for the producers. After it is over they will not be able to put on a military drama without theoretical knowledge of their subject, for so many men have served their country that audiences will be hyper-critical. The producers, to begin with, will have to discontinue using powder which produces clouds of smoke and employ the genuine article—smokeless powder—in its place. They will, I daresay, find it hard to atone for the loss

of much of the spectacular effect which they so heartily like.

If the director attempts, as another instance, to have a shelled house rapidly crumble to nothing, his efforts will not pass muster. Soldiers who have seen active service say that a building only gradually collapses and not all do so in the same way.

The producer has other difficulties than those arising from the dangerousness of the material he handles. Government is the chief source of these.

If these patriotic films were shown in their original state in America they would violate our neutrality. They are therefore subjected to a severe pruning. If, for instance, the title is "Foiling the Fatherland" it is amended to "A Foreign Power Outwitted"; but nevertheless German uniforms cannot be covered up with a subtitle.

Although the producers are doing their best to assist the recruiting movement, the British authorities are also very sensitive. They have practically tabooed the taking of coast scenes. The other day a certain leading man of a certain company was lounging outside the

studio dressed in a khaki uniform, which contained no numbers or buttons, when a too smart policeman took him in charge. That broke up the work for the rest of the day; and they fined him for wearing His Majesty's uniform without serving in the army!

There is also the spy mania. A well known film company was doing a war subject near a military camp without being aware of the fact. Lo, and behold, if a sentinel didn't observe two "Germans" in suspicious attitudes, for the movies, of course. He didn't think twice about arresting them either! and it took a lot of persuasion and influence to secure their release.

## CHAPTER XXXIX

### THE PRACTICAL SIDE OF FILMING THE EUROPEAN WAR

**W**HEN a motion picture camera man is assigned for duty at the European firing line he knows well enough that adventures will figure prominently in his work.

But in spite of his romantic calling, he is constantly reminded of the practical side of his work.

He earns, it is true, considerably more than the war correspondent but he merits every bit of it, believe me.

He will, if he has common sense, trust himself to Shank's pony when moving to and from the firing line. On his arm he carries his trusty camera, and strapped to his back is probably a sack which contains an extra supply of film and a few other necessities to tide him over until he returns to more peaceful regions. On account of his equipment his

presence does not arouse unnecessary suspicion and therefore the chances of his being arrested as a spy are minimized.

One cinematographer had daring enough to disguise himself as an army chaplain, in which capacity he passed many difficult points unchallenged.

The camera is different from that used for ordinary purposes in that bullet proof shields are attached so as to protect the operator from stray shells. It is positively remarkable how the enemy in hiding will mistake it for a machine gun.

The camera man is liable to be caught at any time and have his film and machine destroyed. Even if he gets it over to England for exhibition in that country it may be rejected by the censor appointed for the purpose or else his most exciting sections will be deleted. All this, as you can appreciate, means waste of perfectly good film, traveling expenses and the operator's time. Then should he have the greatest misfortune of all—the loss of his camera—his employers have to write down a loss of something like two hundred dollars.

One of our leading film producing companies received a consignment of film from their men in Europe. It was only two hundred feet in length, yet it incurred an expense of fourteen thousand perfectly good dollars. It was such a costly morsel of negative because it represented two weeks' work on the part of three operators.

But if fillers like these cost so much, it is certain that most or all of the outlay is recovered when a four reel motion picture made up of such items yields (as a certain one recently yielded) ten thousand dollars' profit within a few weeks of its release.

## CHAPTER XL

### IN A FILM FACTORY

**A**FTER a photoplay has been recorded by the camera, the negative, on which everything is recorded, is taken to be developed.

The interior of a film factory reminds you of that of a coal mine. You enter the first workroom and find it as black as night. The guide next takes you along a gloomy corridor lighted only by darkened lamps. You now enter the printing room and note its uncanniness, the result of little red lights that appear at the peep holes of the printing machines.

The printing machines somewhat resemble penny in the slot machines, except that a mass of contrivances is attached to them. Were the slightest ray of daylight to penetrate these machines, thousands of dollars' worth of damage would be done.

To guide and manipulate the negative a girl sits in front of each machine. As the film appears on the reel it moves into an open-



ing, then passes out of this to another aperture, thence to a box underneath.

The film, in the course of its journey through the machine, touches a portion of sensitive film and a little internal electric light appears at this stage to help complete the exposure.

The negative is then taken to the developing room, which is darker still, and wound upon big wooden frames. Girls do this work, while men afterwards dip the frames into developing and fixing solutions and lastly into running water.

In yet another room are a number of large tanks, each one containing concoctions of various colors. If there is a fire in the film, that portion is colored red. But should a portion of the play be supposed to take place at night, a deep blue will do the trick.

Before the celluloid films leave the works they are washed in order to clear them of any extraneous chemicals or matter which might streak or scratch the pictures. They must, in fact, go out in a perfect condition.

THE END



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